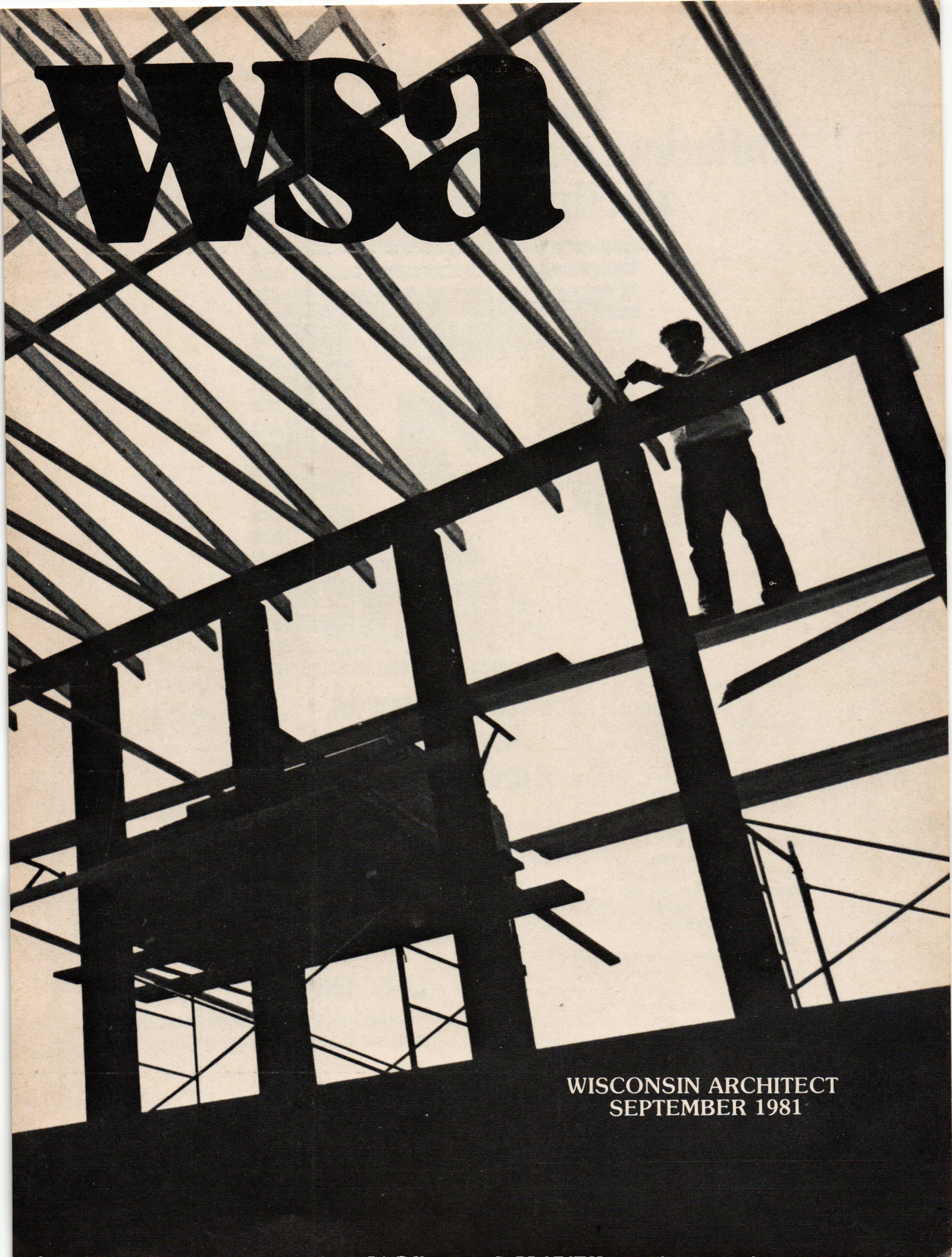
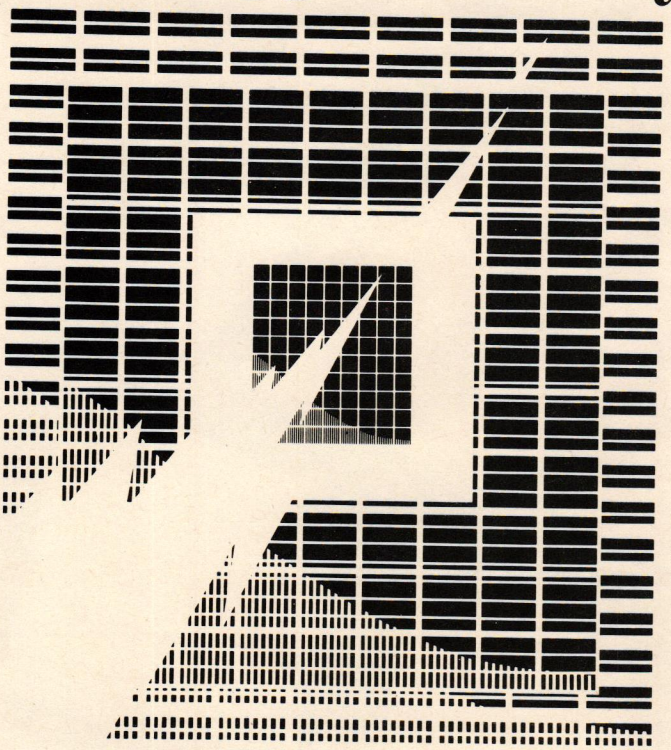
wsa



WISCONSIN ARCHITECT
SEPTEMBER 1981

How can we solve inflation, economic stagnation and declining productivity?



The answer is downright electrifying.

In the sour economic years since 1973, electrical power has come to America's and the world's rescue.

During that rocky period it has done much to offset inflationary OPEC oil price increases and sustain worldwide economic growth.

In this country electricity has been fueling our industrial expansion.

The electric utilities have more than made up for a net decrease in non-electric U.S. energy consumption between 1973 and 1977. As a result they have greatly alleviated economic disruption, unemployment and inflation, all of which could have been much worse.

As our energy needs continue to grow, electricity must continue to come to the rescue. Today, only about 30% of our electricity is generated from scarce oil and gas resources. In the future, that percentage will decline even more as coal and nuclear power generation expand, helping reduce demands to import oil and natural gas.

In fact, by replacing oil and natural gas generation of electricity with more coal and nuclear power, we could save billions annually to help offset the $40 billion drain of U.S. dollars to OPEC nations.

It's time, therefore, that we recognized electricity's potential to aid in solving inflation, economic stagnation and declining productivity.

So if you're thinking of expanding your business and increasing production, think electrically. Consult a qualified electrical contractor and assure yourself of the energy you'll need to grow and prosper.

ELECTRICITY.

We can make it from almost anything. And use it for almost everything.

National Electrical Contractors Association

Milwaukee Chapter
710 N. Plankinton Avenue
Milwaukee, Wisconsin 53203
414-273-6916

Wisconsin Chapter
2801 West Beltline Highway
Madison, Wisconsin 53713
608-271-1912

WSA
WISCONSIN ARCHITECT

Wisconsin Architect, Inc.: *Board of Directors:* Walter E. Zoller, Brian Larson, Glenn Johnson, Noble E. Rose.

Wisconsin Architects Foundation: 615 East Washington Ave., Madison, WI 53703 — Phone 608/257-8477. Harry A. Schroeder, *President;* Leonard H. Reinke, *Vice President;* Richard R. Griffith, *Secretary/Treasurer;* Mark A. Pfaller, Florian Remitz, John E. Somerville, William K. Davis, Doug H. Smith, Richard Knothe, Eric Englund, *Executive Secretary.*

Wisconsin Society of Architects/A.I.A.: *615 East Washington Ave., Madison, WI 53703 - Phone 608/257-8477.*

Board of Directors: Walter E. Zoller, *President;* Brian Larson, *Vice-President;* Glenn M. Johnson, *Secretary/Treasurer;* Noble E. Rose, *Past President, Ex-Officio;* E. William Johnson, Brown Deer; Jack W. Klund, Madison; Mary A. LaCerte, Wausau; David E. Lawson, Madison; Emma E. Macari, Madison; Richard F. Maleniak, Madison; Dennis L. Olson, Appleton; Richard Peeples, Milwaukee; Lawrence R. Earll, Milwaukee; Robert J. Sajbel, Appleton; Douglas H. Smith, Chippewa Falls; Wayne E. Spangler, Rice Lake; Frederick E. Zimmermann, Madison; Eric Englund, *Executive Director.*

North Central Region: Leroy Bean, *Director.*

Southeast Chapter Officers: Richard C. Peeples, *President*; Lawrence R. Earll, *Vice President/President Elect;* Dan Christiansen, *Secretary/Treasurer.*

Southwest Chapter Officers: Emma Macari, *President;* Richard F. Maleniak, *Vice President/President Elect;* Douglas N. Kozel, *Secretary/Treasurer.*

Northeast Chapter Officers: Dennis Olson, *President;* Robert J. Sajbel, *Vice President/President Elect;* George W. Ehrich, *Secretary/Treasurer.*

Northwest Chapter Officers: Mary A. LaCerte, *President;* Doug H. Smith, *Vice President/President Elect;* Charles D. Wahlberg, *Secretary/Treasurer.*

Wisconsin Architect Editorial Board: Peter Schuyler, *Chairman;* Uel C. Ramey, Douglas Ryhn, Elizabeth Mead, Eric Englund. Times Publishing Co., Random Lake, WI - Printer; Bob Arndt - Graphics.

The Wisconsin Architect is the official publication of the Wisconsin Society of Architects/A.I.A., published by Wisconsin Architect, Inc. Address all editorial and advertising inquiries to: Editor, Wisconsin Architect, 615 East Washington Ave., Madison, WI 53703; Phone: 608/257-8477. The Wisconsin Architect and WSA disclaims liability for statements by the editors, contributors, and advertisers.

TABLE OF CONTENTS

Where Were You When Your Profession Called 3

News Photographers Competition 4

Southwest Chapter's 1981 High School Architectural Design Competition 7

CM From The Risk Management Perspective 11

An Industry In Transition 14

SOCIETY NEWS

Fall Workshops 17

WSA Membership Report 17

1981 Honor Awards Reports 17

Think Snow 19

Did You Hear The One About Sales Tax For Architectural Services 19

People & Places 21

Membership Actions 23

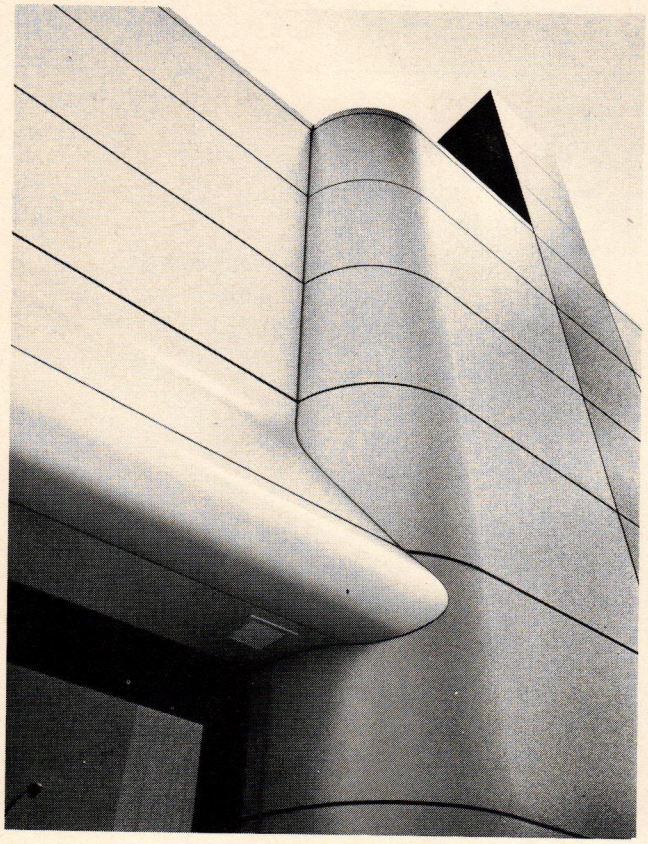
ADVERTISER'S INDEX

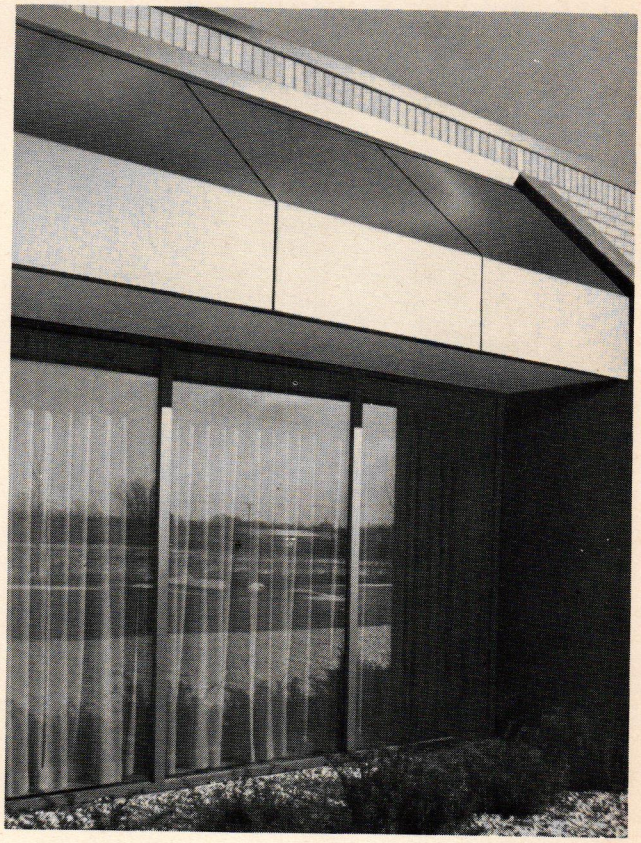
Accurate Security Ltd. 35
Advance Plastic & Glass Inc. 26
Amble Landscaping Inc. 35
Anderson Landscape Architect 35
Architectural Woodwork Institute — Wisconsin Chapter 22
Arnold & O'Sheridan Inc. 34
Associated Allied Industries Inc. 31
Automatic Temperature Supplies Inc. 10
Automatic Temperature Supplies Inc. 28
Badger Automatic Door Inc. 30
David Barnett Galleries 34
Bethel Steel Fabricators Inc. 31
Birks-Halyard Corp. 35
Brust Engineering Inc. 34
Buechel Stone Center 8
Butler Tile Sales Inc. 35
Child Crest Distributing Inc. 16
Continental Columbus Corp. 16
Copy Matics 22
Cornerstone Group Inc. 34
Custofoam Corp. 28
Custom Drywall Inc. 20
DCS Color & Supply Co. Inc. 20
D'Appolonia 35
Design Engineering Service Inc. 35
Arthur G. Dietrich Co. Inc. 20
Arthur G. Dietrich Co. Inc. 30
Dolan & Dustin Inc. 34
Ecom Associates 36
Elzinga & Volkers Inc. 34
Enterprise Art Glass Works Inc. 28
Graef-Anhalt-Schloemer & Associates 34
M-K Hartmann Sons Inc. 8
Health Insurance Corp. 33
A. J. Heinen Inc. 30
Holland & Kurtz Inc. 34
In-Sink-Erator Division 22
Interior Plant Design 32
J & H Heating Inc. 26
Thomas H. Jaeschke & Associates Inc. 34
Jones & Brown Co. Inc. 2
J. J. Koepsell Co. 10
Kohler Co. - Kohler Listing 9
Kohler Co. - Fast Response 20
Lakeland Plumbing Supply Co. Inc. 10
Lemberg Electric Co. Inc. 26
James Luterbach Construction Co. 20
Maier Construction Inc. 30
Manci & Haning Inc. 34
Milwaukee Plumbing & Heating Supply Co. 10
Milwaukee Testing Laboratory 34
Murphy Supply Co. 10
National Electrical Contractors Assn. Inside Front Cover
Package Boiler Burner Service Corp. 28
W. S. Patterson Co. 10
Photocopy Inc. 31
Pittsburgh Paints 26
Potter's Art Supply 31
Walter R. Ratai Inc. 34
Redmond Construction Co. Inc. 35
Ridgway's 33
Romatic Inc. 31
Ryan Inc. of Wisconsin 35
SRI - Structural Research Inc. 35
Victor O. Schinnerer & Company Inc. 32
Sheet Metal Contractors of Milwaukee 8
Sheet Metal Workers Union #24 30
G. Wentworth Smith 33
Soil Testing Services of Wis. Inc. 34
Syring Construction Co. 30
H. W. Theis Co. 10
Twin City Testing & Engineering Lab 35
Uihlein Electric Co. Inc. 26
United Plumbing & Heating Supply Co. 10
Warzyn Engineering Co. 34
Skot Weidemann 34
Wilfong's Landscaping Inc. 35
Wisconsin Brick & Block Corp. 31
Wisconsin Face Brick & Supply Corp. 32
Wisconsin Public Service 7
Wisconsin State Conference of Bricklayers 35
Wisconsin Testing Laboratories 34
Wittock Supply Co. 28

Cover Credit

Photo by Mark Hertzberg
Journal Times Photo

ALUCOBOND™





curve it... or we'll give it to you straight

Outside or in, it's the building material for the '80s. Flatness that's clean, smooth, and won't ripple, buckle or bulge. Formability that isn't stopped by curves and corners; it bends and folds to your needs.

Alucobond gives you the freedom of design you want for new buildings, renovations and remodeling projects. Colors to add imagination to exteriors and interiors—six plus anodized finishes.

Alucobond is a thermoplastic core sandwiched between two aluminum sheets. Panels are sized up to 5′ x 28′ with thicknesses of 3, 4 and 6mm. We fabricate it, and we sell it.

Left: Guardian Savings and Loan, Architect Bernheim, Kahn and Lozano, Architects Ltd.

Right: Impact Industries, Architect Robert F. Mall Assoc.

Jones & Brown Company, Inc.

568 W. Winthrop, Addison, Illinois 60101 • (312) 543-0300

Where Were You When Your Profession Called??

By Eric Englund

Did you hear the story about a Wisconsin Circuit Court Judge that ruled that the Wisconsin Environmental Protection Act applies to the review of plans and specifications by the Department of Industry, Labor and Human Relations?

Unfortunately it's fact . . . not fiction. The impact of that decision means that DILHR will be required to undertake an environmental assessment and possibly an environmental impact statement on many of the 20,000 sets of plans that it reviews annually. DILHR estimates that it will need 3 to 7 million dollars to undertake this process. If they are forced to go in this direction, their only source of revenue for this process will be by increasing their fees.

Clearly this process will in many instances substantially delay project review and approval by DILHR. DILHR's attorney has indicated that **even if** an environmental assessment or an environmental impact statement indicates that a project will have gross negative impact on the environment that they (DILHR) will still only have the statutory duty and authority to compare the plans to the building code and, assuming that the plans are in compliance with the code, note such approval and recommend that a building permit be issued. In other words, the time, expense and delay associated with an environmental statement will have no impact or effect on DILHR's singular statutory duty of comparing the plans to the building code.

The WSA has been actively involved in opposing this matter:

1. The WSA joined other organizations in submitting a brief to the Wisconsin Supreme Court arguing that they should take immediate jurisdiction over this case.

2. WSA was active in forming a construction industry coalition to propose an ammendment to the Budget Bill being considered by the Wisconsin Legislature which clarifies that DILHR's plan review function is exempt from the Wisconsin Environmental Protection Act.

3. 125 WSA minutemen were asked on three separate occasions to contact their state legislators requesting their support of this ammendment to the Budget Bill.

4. WSA's staff has spent several hundred hours seeking a legislative remedy which will negate the very destructive impact of this Court decision.

5. A separate bill has been introduced before the Wisconsin Senate clarifying the DILHR's plan review function is exempt from the Wisconsin Environmental Protection Act.

Were the WSA's efforts successfull???

As of the date of this article Legislative relief is still being considered by the Wisconsin Legislature and the Wisconsin Supreme Court has the appeal of the Circuit Court under review.

If you are a WSA Minuteman who received the mailing and have contacted a legislator . . . thank you for your efforts. If you are a WSA Minuteman who received the mailings and did not contact a legislator . . . we could have used your help and are interested in your explanation for non-participation (anonymous or otherwise) in this very critical matter. If you are a WSA member who is not previously registered as a WSA Minuteman . . . consider doing so by calling the WSA office and obtaining a registration form. If you are not a member of the WSA . . . consider joining, we need your participation and involvement in order to better speak for architecture in Wisconsin.

News Photographers Competition

The Wisconsin Society of Architects annually sponsors an Architectural News Photography Contest for members of the Wisconsin News Photographers Association (WNPA). Award certificates and cash are presented by the Wisconsin Society of Architects to news photographers from Wisconsin recognizing excellence for their architectural photography.

Members of the WNPA submitted pictures in three categories:

1. Single picture of a building or buildings under construction.

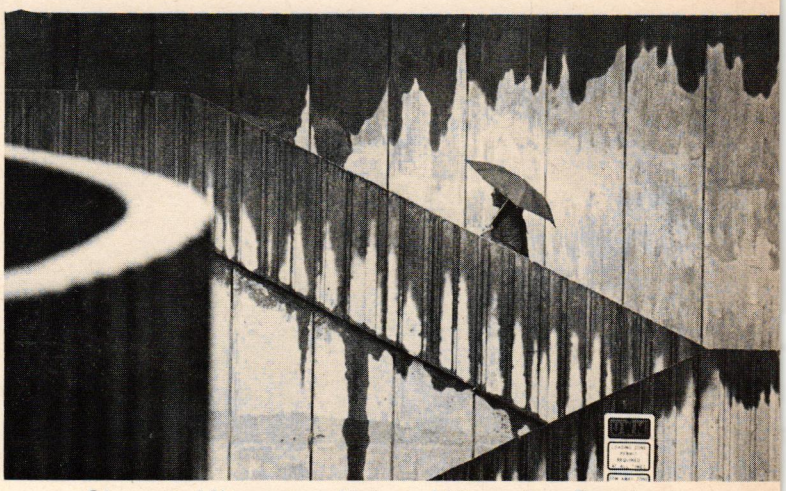
2. Single picture of one building or a complex of buildings fully constructed.

3. A picture story composed of a multiple picture presentation.

Judging for each entry is based on the quality of the photographer's work in interpreting and presenting the subject, not necessarily of the subject itself.

In addition to receiving an Award Certificate, award winners received cash prizes totalling $330. Pictures of award winners for 1980 and 1981 are shown on the following pages.

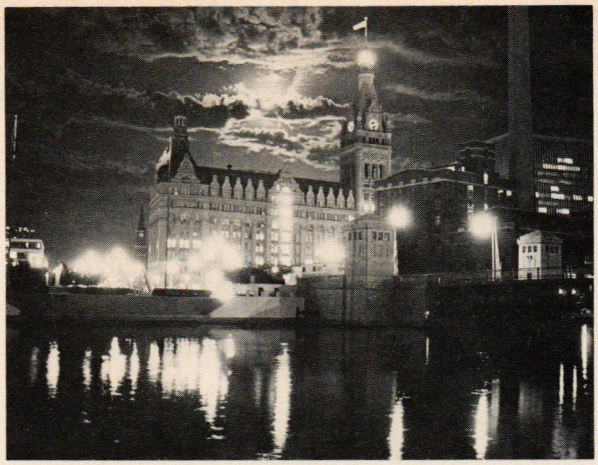
Due to space limitation, all winners are not shown.



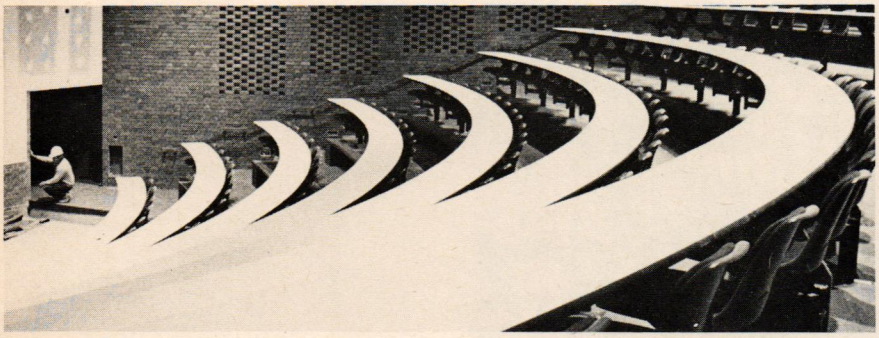
Class II, Milwaukee Union, Milwaukee Sentinel
2012 East Menlo Blvd., Shorewood, WI 53211
HONOR AWARD

Class II, Hoan Bridge, Milwaukee, WI, Karen A. Sherlock,
2240 S. Layton Milwaukee, WI, Newspapers, Inc.
MERIT AWARD

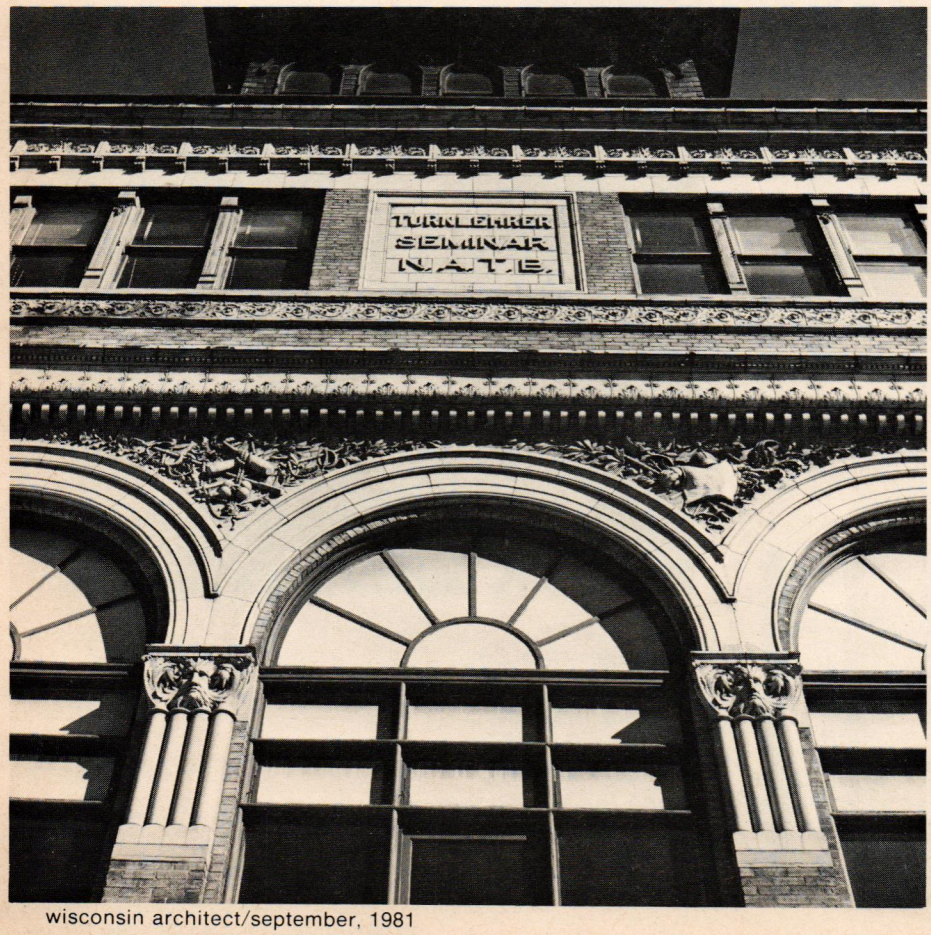
Henry Kanazawa, AIA; Joe Paskus and Jim Potter, AIA jury the 1980 WNPA Architectural Photography entries.

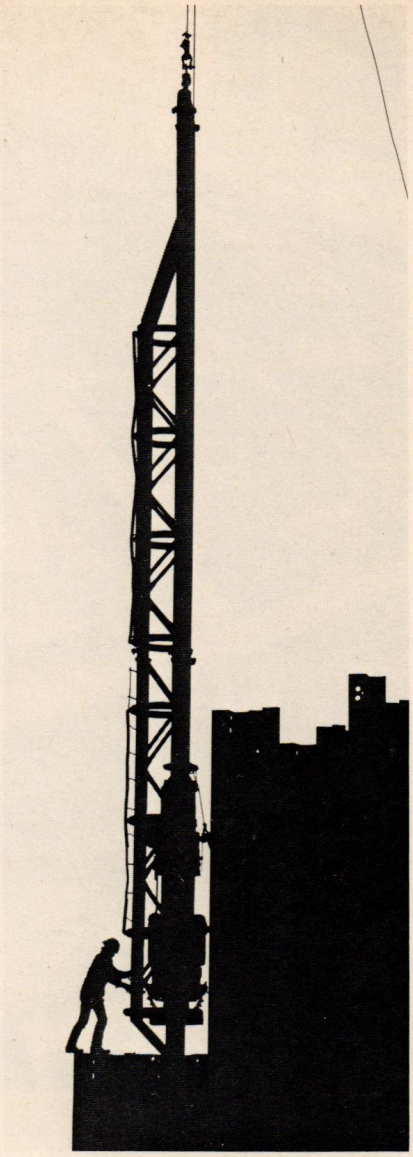


Class II
Milwaukee City Hall
2012 E. Menlo Blvd.
Shorewood, WI
53211
Milwaukee Journal
HONORABLE
MENTION



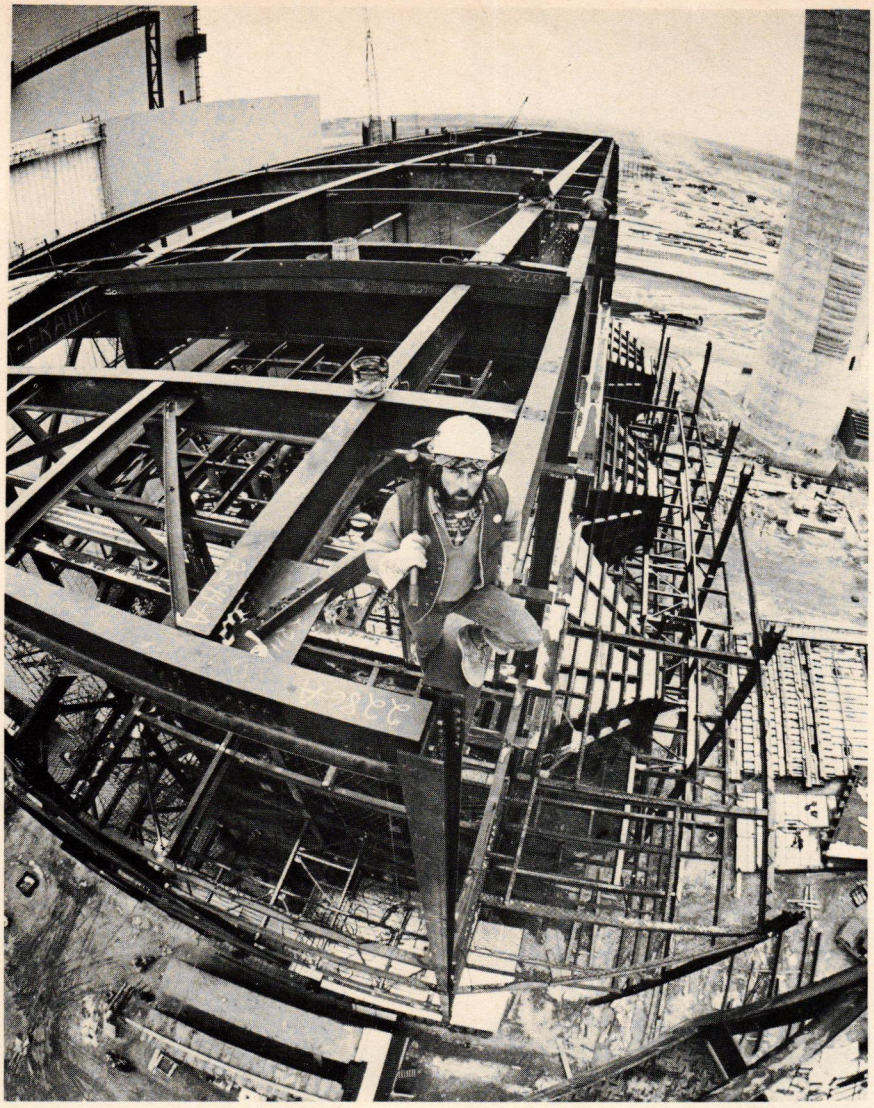
Class I, Medical College of Wisconsin, Milwaukee, WI.
Karen A. Sherlock, 2240 S. Layton, Milwaukee, WI, Newspapers, Inc.
HONORABLE MENTION





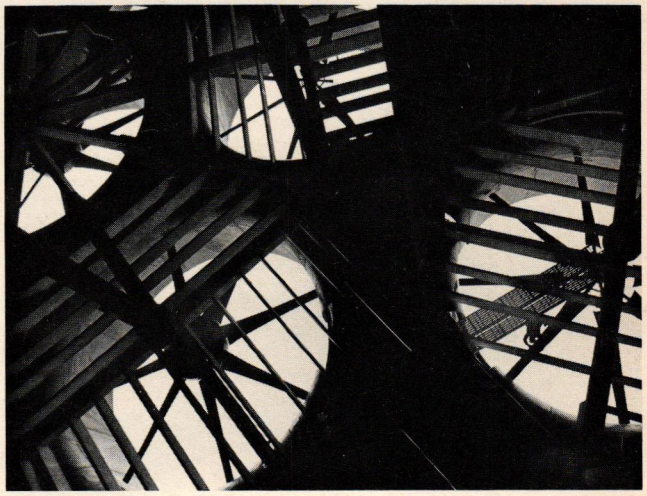
Class I
Port of Milwaukee Harbor Basin
Milwaukee, WI
Karen A. Sherlock
2240 S. Layton Blvd.
Milwaukee, WI 53215
Newspapers, Inc.
HONORABLE MENTION

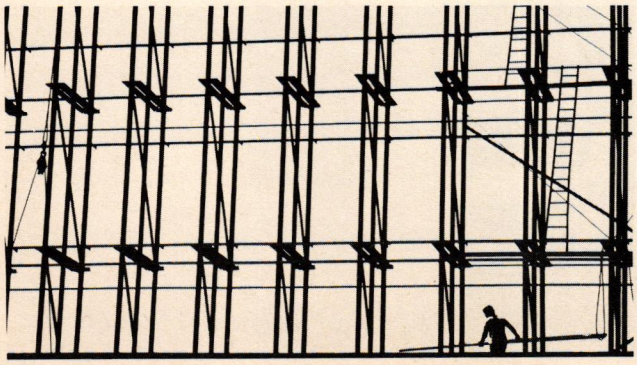
1981 Honor Award - Picture Story
German-English Academy, Milw.



Class I
Pleasant Prairie Plant, Wisconsin
Karen Sherlock
2240 S. Layton Blvd.
Milwaukee, WI 53215
Newspapers, Inc.
HONOR AWARD

Class I
Wisconsin Electric Power Plant
Pleasant Prairie
Journal Times Photo
Mark Hertzberg
212 Fourth St.
Racine, WI 53403
HONORABLE MENTION





Class I
American Can Co.,
Ware House, Green Bay
Mike Brisson
2124 Farlin Avenue
Green Bay, WI
Freelance for Newspaper &
American Can
TITLE: "Framework"
MERIT AWARD

Gary Zimmermann, WPSC Industrial Application Engineer, left. Chuck Bartel, Wausaw Concrete, right.

"Architects should find out about fly ash. I think it's important."

— Chuck Bartel
Wausaw Concrete
Wausau, Wisconsin

"Wausaw Concrete Company has advocated the use of fly ash in our concrete block and pipe products throughout my sixteen years here."

"Sure we believe using fly ash means a cost savings to us. But there's a lot more to it than that. Using fly ash as an additive in manufacturing block and pipe makes them more impervious to moisture. That means our clients get blocks that provide a more water-tight masonry wall, and pipe that meets and exceeds the current infiltration and exfiltration specifications.

"And adding fly ash to concrete pipe improves its resistance to many industrial chemicals and acids it might be exposed to:

"Fly ash adds lubricity to our mixes, too. This gives us a more consistent quality, reduces friction for easier manufacture, and lessens wear on machine parts.

"We also feel there is an increase in strength and durability. Concrete with fly ash has a latent strength that will continue to gain in compression strength.

"So, of course, we use fly ash to reduce costs. But it's definitely a case of getting more for less. And ecologically we're recycling an otherwise wasted by-product."

Find out more about why you should specify fly ash as a concrete or concrete products additive. Write to WPSC for a FREE fly ash information kit.

WISCONSIN PUBLIC SERVICE CORPORATION

managing energy today...for tomorrow

P.O. Box 700 Green Bay, WI 54305

Public Service

Solar Energy Space Heating Systems
Solar Energy Water Heating Systems
Heat Reclamation
Industrial Ventilation
Energy Conservation
Heat Transfer
Air Balancing
Heating, Cooling & Humidification
Architectural Sheet Metal
Pollution Control
Fire Dampers
High Pressure Systems
Low Pressure Systems

WORKING EFFECTIVELY TO MEET THE ENERGY CHALLENGE
"EVERYTHING WE DO TOUCHES YOUR LIFE"

SHEET METAL CONTRACTORS OF MILWAUKEE
7635 W. BLUEMOUND RD. MILWAUKEE, WIS. 53213
AREA CODE 414 258-8176

Our Technical Manuals and Specification Manuals can help you.

BUECHEL STONE CENTER
BUECHEL STONE CORP.

"For All Your Building Stone Needs"

Dennis Buechel
PHONE: 414-922-4790

Hwy 175 South
P.O. Box 907
Fond du Lac, WI 54935
(414) 922-4790

County Trunk H
Rt. 2 Box 142X
Chilton, WI 53014
(414) 849-4108

Quarries Of
- Lightweight Texas Bronze
- Wisconsin Weatheredge Veneer
- Flagging (Patios)
- Lightweight Flagging
- Retaining Wall Stone
- Split Granite Fieldstone
- Chestnut Chunks

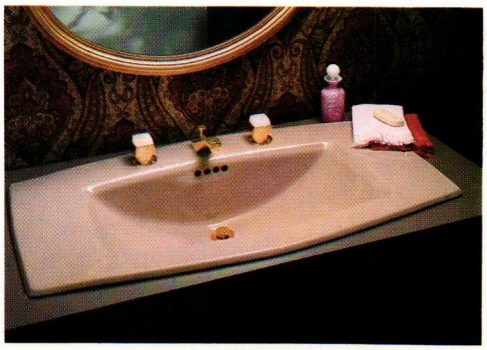
SPECIALISTS IN BUILDING AND LANDSCAPING STONE FROM ACROSS THE COUNTRY

M-K HARTMANN SONS, INC.
CARPENTER CONTRACTORS

Mike President
Keith Vice-President
Jim Executive Director

5861 NORTH 71st STREET
MILWAUKEE, WISCONSIN 53218
PHONE (414) 466-2832

ASSOCIATED BUILDERS & ABC CONTRACTORS INC.



Wild Rose

THE BOLD LOOK
OF **KOHLER**

At the edge of your imagination, there's a beautiful blush of color for your new bath or powder room. Kohler calls it Wild Rose. A color to experience. A color to savor and enjoy. A soft and gentle color to revel in as you pamper the body and refresh the spirit. Wild Rose. Easy to live with. Now available in an exclusive selection of Kohler plumbing products.

is executed during construction. The general conditions of the contract for construction, the drawings and technical specifications, the administration of the project and the cooperation of all participants set the rules that are instrumental to the management of static risk.

In its development, the CM system (CMS) specifically strived to expose the risks of project delivery. By doing so, it was able to deal with the risks in a beneficial manner to the ultimate advantage of the owner. Once the risks were identified, methods and procedures were developed and installed to eliminate, avoid, prevent, reduce, combine, insure, transfer and finance the risks involved. Using the General Contracting system (GCS) and Design-Build system (DBS) as a starting point, the CMS structured itself to provide risk management opportunities while utilizing the existing construction industry participants in slightly different roles. The CMS in its development extracted and utilized most of the beneficial methods and procedures that both the GCS and CMS developed over the years. It enjoyed the luxury of selectivity and refinement of existing practices and it accepted this unique opportunity to create its own idealistic structure of operation.

Under the CMS, the team (Architect/Engineer, Owner and CM) has the opportunity to create an awareness of risk and to assist each other in the selection of the best techniques for controlling and/or financing these risks. The CM, in his unique role on the team, is in fact a risk manager.

Perhaps the adage "an ounce of prevention is worth a pound of cure" alludes to a very elementary version of risk management. If exposure to risk is specifically managed, to provide a beneficial outcome, a useful and cost-effective result can be achieved. Thus, risk management, both as a concept and a practice, has application in every endeavor that has a potential of financial risk. With the element of financial risk so prevalent in project delivery, what better opportunities for risk management can we find?

The ultimate risk categories in project delivery are cost and time overruns and quality deficiencies. The opportunity for detrimental effect in these three categories is eminent anytime during the course of project delivery. If we separate project delivery into its eight recognizable phases, —

1) Feasibility
2) Schematic
3) Design Development
4) Contract Document
5) Bidding
6) Award
7) Construction
8) Warranty/Guarantee

— we can consider the possibilities of detrimental effect categorically. It is obvious that certain phases are more prone to detriment by certain risks than by others. However, all three risk categories hold potential to one degree or another in each phase.

Within the scope of the standard AIA agreement between owner and architect, services during the feasibility phase are excepted. Unless special arrangements are made for services during feasibility, an owner is left to his own devices during a project's formative stage. The CMS recognizes the risks involved in project formulation from the time and budget aspects, and provides expertise to the owner in developing budgets and time schedules. While the CM documents of both the AIA and AGC are somewhat dim with regard to services during feasibility, the philosophy of the CMS and the objective of the construction manager, is to get on board as soon as possible. The purpose is to help the owner develop a project that will meet his needs, be adequately funded and realistically scheduled. The CM is providing an obvious and much needed control function during feasibility. He is managing the risks inherent to feasibility studies.

Once the design phase has begun, we can see the major contrast between the GCS and the CMS. The construction manager devotes full time efforts to evaluating risks and proposing courses of action to avoid, prevent, reduce, combine, insure, transfer or fund them. The GCS does not provide for a contracting and/or construction oriented specialist during design. Consequently, by using the CMS, considerable progress can be made towards risk management in areas heretofore unstressed. *Value engineering and life cycle costing **reduce** the risk of over-design by closely matching owner needs with his budget in a cost-effective manner. *Accurate budgeting and estimating **controls** the risk of exceeding the construction budget and experiencing aborted projects or costly redesign. *Detailed scheduling covers the total project timeline and not just the construction phase. This approach keeps all phases of the effort on schedule and **reduces** the risk of time slippage at any time during the project. *Constant document review during phases 2, 3, and 4 reduces the opportunity for dimension errors, specification gaps and **avoids** many change orders during construction.

One of the less obvious, yet major risks in project delivery, is the risk of not getting the most responsive bid price for the project. The CMS **insures** against this risk by using the multiple bid format. By accurately defining the work scope of each division of work, or bid package, and receiving competitive proposals directly from subcontractor types, the owner is assured of getting every low and responsive bid. The total of these bids has to be the lowest price for the total project.

This multiple bidding procedure takes care of other risks as well. It **reduces** the risk of getting involved with unqualified contractors, because the bidding process is under total selective control. It **avoids** the risk of noncompetition in the traditional subcontracting tier by virtue of

the direct bidder recruitment process. It **prevents** the risk of spending dollars on undetected high cost items and systems, because the cost of each division of work is accurately known and can be questioned.

There are other risks managed by the CMS and by the construction manager. *The risk of default by the single general contractor is **transferred** proportionately to each of the multiple prime contractors. This eliminates the risk of total project slow down in case of default. *The risk of progress payment transfers from contractor to subcontractors and suppliers is **eliminated**. As a result, the risk of liens being filed against the owner are greatly **reduced**. *The greatly expanded and more accurate schedules of value generated by the multiple contract format greatly **reduces** the opportunity for overpayment and front loading. *The continuous on-site presence of a fiduciary representative (The Field CM) greatly **reduces** the risk of construction and contracting negligence during the construction phase.

The CMS also uses risk management approaches other than avoid, prevent, reduce and insure. *By defining work scopes in an objective way, the construction manager can isolate high risk construction sequences by combining them in one division of work. This provides a better opportunity to constructively focus on work that has high risk potential. *To eliminate the risk of unbonded subcontractor failure in the GCS, the CMS directly bonds all contractors. The multiple bonds cost more than the single GC bond, but the insurance against failure is worth the extra cost. The approach to risk management is **funding** in this case.

Using the thought process illustrated above, one can generate extensive situations and conditions in project delivery that will respond to risk management. Of course, the decision as to whether the CMS is a worthy alternative to the GCS or DBS still rests with the person making the analysis. However, the viewing of project delivery as a series of identifiable risks brings a new perspective to the arguments for and against the CMS.

Project delivery can be perceived as a step-by-step execution of procedures that mesh together into a format or system. By isolating each procedure and its inherent problems, we can apply ourselves to devising better ways to solve those problems. As a result, the procedure will be improved and in turn the system will be improved.

If we look at each problem as a risk situation capable of analysis and assessment, we can determine the best way to handle the risk to the advantage of a particular party. In the case of project delivery, the eventual benefactor has to be the owner. Consequently, risk considerations are specifically oriented to the owner's best interests. If all of the risks are successfully isolated and beneficially dealt with, it can be concluded that the sum of the risks — project delivery — will also be beneficially dealt with.

In the early days of CM, a popular comment by general contractors was that CM was not new, it was merely what they had been doing for years but under a new name. This attitude, or impression, has significantly hampered an understanding of exactly what the CMS actually is. Rather than investigating the system as an integrated and coordinated series of procedures that are extremely different from those in the other two systems, it was simpler and probably more self-serving to only look at the end results. There is no doubt that the end results of all three systems are exactly the same — project delivery. Consequently, the popular comment referred to is correctly stated. However, upon closer examination of the system itself, it can be seen that even the end results have considerably different characteristics. There has been significant improvement in the cost/quality ratio, the timeline and the credibility of overall performance.

CONCLUSION

Perhaps the risk management concept can provide a new approach to the evaluation of the construction management project delivery system. It is a simple approach that is not time consuming, and certainly easy to use. In fact, many CM systems were unwittingly developed through the use of risk management concepts. Consequently, the concept should certainly work as an analysis tool for those only seeking an understanding of the system.

To implement the process, all one has to do is make a list of the many actions and procedures used during design and construction in the GC system of project delivery. After each action or procedure, state its goals or objectives. Then list the problems, both big and small, that stand to hamper the goals and objectives. Be certain throughout the process that the total orientation of all goals and objectives is toward the owner's best interests. Obviously, this last requirement is of utmost importance to an accurate end result.

If each problem is viewed as a risk that must be taken, and the best possible solution to that risk is viewed as the analyst's responsibility, the best solution to the problems can be generated. With due consideration given to industry constrictions and abilities, the sum total of the best solutions to problems will pyramid to the best solution for project delivery. There are always better ways of doing what we do. All we have to do is search for them and find them.

Once the analysis process is concluded, one only has to look at his results to determine if the system he has generated can still be called general contracting, or if change has generated an entirely new system. Obviously, many who made the analysis back in the seventies opted for the latter. Chances are more will do so in the future. Hopefully, the risk management concept as it applies to project delivery will be a helpful tool.

An Industry In Transition

Provided by Allen Brady,
Executive Vice President, Madison Association of Plumbing Contractors;
Sheet Metal and Air Conditioning Contractors National Association Madison Chapter;
Mechanical Contractors Association of Madison

The old time sheet metal contractor had to be ninety percent tradesman, was only ten percent businessman but made up for it being a natural born horsetrader. Deals were direct and face to face. Once the bargaining was over a handshake was the contract. A handshake commenced the job, and a handshake finalized it. Jobs had a clear beginning and a precise ending when the last register was screwed in place.

He oversaw the work progressing in the shop and on the job site and even did a lot of it himself, applying his vast knowledge of the tools and trade directly, bringing his personal efficiency to bear. He sold a job, did it, collected the money, then went on to the next. Each job completed paid off a little more of the mortgage on his business property and home, added to his bank account, and perhaps helped him buy another piece of real estate.

His aspirations were not high, generally he was content with seeing to it that his family were fed, housed and clothed and if he dreamed, it was of helping his kids to get the higher education that he never had; he could not see himself as the social equal of a doctor or a banker, but he hoped that one day his son would be.

If he was a little too inclined to revere the credentials of a doctor, lawyer or banker, he was nevertheless able to derive a great sense of pride in his craft and satisfaction in being able to personally exercise it, and view tangible results. An air exhaust hood on a roof, a duct system serving a warm air heating plant or a ventilation system were things that he had probably personally designed, laid out, fabricated and installed to suit a customer's vaguely stated requirements. He calculated heat loss and air changes, duct sizes, occupancy needs, and was involved personally from start to finish. He usually received a healthy cash deposit before he even commenced the job.

He dealt a lot in cash. For one thing there was not a ravenous department of revenue breathing foully down his neck, demanding to see an accounting of every transaction and the history of every dollar that passed through his hands, picking over all he did. He received a lot of payments in cash, tucked cash in his employee's pay envelopes.

He seldom had many employees, often only one or two old hands that had been his buddies for years, who had probably worked with him when he was a journeyman, before he saved up a little money to go in business with. There was a young apprentice - maybe two - he was bringing along. The shop was a focal point for the kind of unity and pride found in a hard working, practical, down to earth and hard-nosed family. That was what they were - a family. He got enough for his work to tide these few employees as well as himself over barren spots, making things up ahead of time for future jobs or to put on the shelf, knocking off early to split a box of beer and chew the rag. He knew their wives and the names of each of their kids. Sometimes there'd be a shop picnic, the wives would make up the cold chicken and dishes of potato salad and the ham and bologna sandwiches. The men would play handball with the kids on the

grass. He'd supply the beer and soft drinks and tease, taunt and torment the women into the ballgame. At Christmas time he'd have them over to his house, kids combed and shined, men stiffly formal in Sunday suits, ladies looked relaxed and pretty. There'd be gossiping, games and singing around the piano.

Once it was like that, but not anymore.

Yet the image prevails. Engineers, for example, are convinced that contractors have sufficient money in their prices to cover contingencies - things not made clear on the drawings, minor changes to make things work. They do not realize the comfortable contingency allowances were wrung out of the jobs long ago by steadily toughening competition. Despite the absence of a contingency allowance in his bid, the contractor is often bullied and blackmailed into making up design deficiencies and even performing extra work for free. The sheet metal contractor new in business is particularly vulnerable; he wants to impress both engineer and head contractor with his cooperative attitude, and show them he is no miserly penny pincher. All he does impress them with is his credulity and if he has entered a contract with a price substantially lower than experienced firms then they are likely to demand more concessions.

The old time image still persists in the minds of most persons newly entering the field, and quite a few who have been contractors for many years but won't accept the facts of change. They still believe rule of thumb, back of an envelope practises will suit today's complexities, and trustingly, that the verbal equivalent of a handshake will seal a deal. They are constantly victimized as a result. On the contrary, costs have to be carefully counted and scrupulously rechecked if the contractor is to survive with today's narrow margins and intense competition, and the type of terms and conditions buried in modern contracts. Today's prices do not cover any free work to make up for what a designer may have omitted; if the contractor has not studied every word and line of specification and drawing and priced in everything, free work will take away his profit and maybe more.

Sheet metal systems - air handling, cladding and decking, food services, industrial ventilation and material handling - have all vastly increased in size and complexity. The chain of communication and payment that links the man who does the work with the party it is done for is thinned and filtered through a maze of consultants, contractors, subcontractors, sub-subcontractors, inspectors, government regulating agencies, suppliers, supervisors, foremen, and the dollar issued at the top is worn down to a gaunt travesty of a dollar by the time it reaches bottom. A job is often more time in the planning than in the execution; and the post completion quibbling that goes on often consumes an equal span of time before the final dollar is received, many times after much valuable performance has been written off unpaid.

Today's contractor is still usually a product of the trade - but seldom has opportunity to exercise his skills. Virtually one hundred percent of his time is spent at his desk, on the telephone, or at meetings. He must learn in extremely short order, when he chucks his overalls in a corner and hangs out a sign, to be an accountant, a lawyer, a financial expert, a public relations officer, a salesman, a negotiator, a philosopher, something of a psychiatrist, and learn to accept calmly statements that before would have rendered him incoherent with rage.

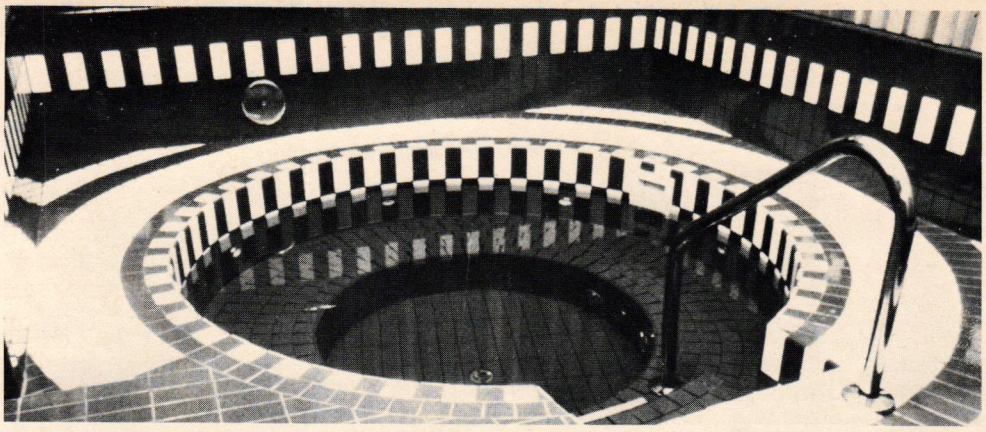
The sheet metal contractor must now be one hundred percent a businessman. If an aspirant believes only his craft knowledge and a little intuition will see him through, he is in for a cruel surprise. He may survive long enough to acquire the necessary knowledge, but what he will in the end pay for his education would have made him a brain surgeon.

Sheet metal contractors coping day by day with the complexities of the industry should not feel one fraction less in stature than a practitioner in a more publicized profession. Our people all have paid their green fees, and daily play a tougher course.

This is now a career strictly for professionals; a lot that was good and enriching has been lost, true enough, but fulfillment as an individual is reward now as in the past, and today's more sophisiticated contractors are worthy inheritors of the legacy passed on by yesterday's tough breed. They have to be perceptive to the changes that have taken place, that's all, and brace themselves for future shock.

AFTERMATH

So forth to steal he softly stole
The bags of chink he chunk
And many a wicked smile he
smole,
And many a wink he wunk.



Paint Your Project With Francican Ceramic Tile

Just A Few Standard Colors

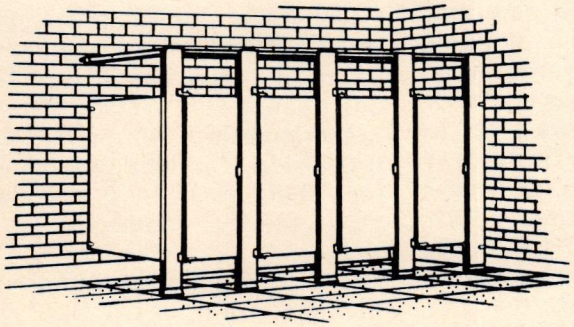
Popcorn	Nutmeg	Almond	Ebony	Wedgewood Blue
Buff	Russet	Blueberry	Golden Tan	Silver Gray
Wheat	Dusk	Dove	Highland Green	Sandrift
Mesa	Chocolate	Dusty Pink	Ice	Mocha

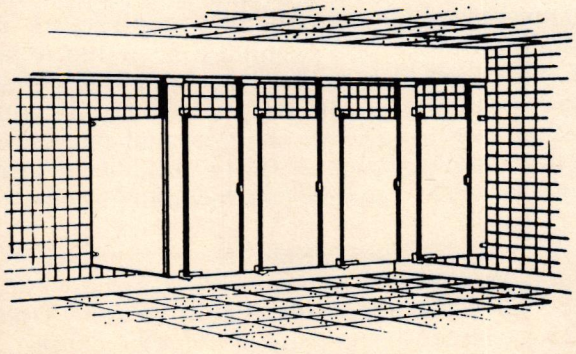
For Further Information & Samples Please Contact:

(414) 462-9770

ChildCrest
A division of Rollin B. Child Inc. Hopkins MN
DISTRIBUTING, INC.

6045 N. 55th St.
Milwaukee





CONCOL

COLOR STYLED

TOILET PARTITIONS

- Floor Mount or Ceiling Hung Partitions.
- Heavy Gauge Galvanized Steel Panels with Honeycomb Fiber Board Core.
- Choose from Sixteen Beautiful Colors of Baked Gloss Enamel Finishes.
- Polished Stainless Steel Hardware and Pilaster Shoes.
- Special Custom Designs Available Plus Dressing Stalls, Handicap Stalls, Children's Stalls and Urinal Screens.
- 1-2 Week Delivery

CALL 414-623-2540 Today
or Send for FREE Colorful Brochure

CONTINENTAL COLUMBUS CORP.
105 Continental Drive
Columbus, WI 53925

wsa

SOCIETY NEWS

FALL WORKSHOP

"The Design Architect in the 80's" will be the topic of this year's WSA Fall Workshop, to be held October 15 at Devil's Head Lodge, Merrimac, Wisconsin.

Doug Smith, AIA, Fall Workshop Chairman, reports that Chicago architect John F. Hartray, Jr., FAIA will be the feature speaker. Mr. Hartray is a principal in the firm of Nagle, Hartray and Associates, Ltd. (formerly Booth, Nagle, and Hartray). Prior to joining his firm in 1977, Mr. Hartray was associated with the Chicago offices of Skidmore, Owings and Merrill and Harry Weese and Associates. Mr. Hartray is also on the staff of the Chicago School of Architecture.

In planning this years WSA Fall Workshop, Doug Smith has attempted to create a workshop atmosphere in which there can be greater discussion (debate) between the speaker and the audience. In focusing on "The Design Architect in the '80's" the program will address topical issues pertaining to advertising, procurement of architectural services, design build delivery, the new ethic, and technical innovations affecting the practice of architecture. Smith challenges all architects to set aside this day to roll up their sleeves and address common concerns for their profession in the forthcoming years.

If you have not yet received a Registration Brochure or require additional information, contact the WSA office.

WSA MEMBERSHIP REPORT

The WSA now has close to 700 members. This figure represents a substantial increase from the 525 individuals that were members two years ago.

Research indicates that more than 50% of the time, the immediate impetus for joining the WSA is provided by a member asking or urging a friend or associate to join. This request is usually made by someone who the non-member trusts or respects. Growth in the WSA membership is directly related to maintenance and growth of the quality of programming available to the WSA. Urge a friend or associate to join. If you need a membership brochure, an application, or background information, contact the WSA office. If you or a non-member feel that the WSA should be taking a new or revised direction in terms of its programming feel free to speak up.

Take the initiative. Ask a non-member to join. Explain the benefits of membership and the multiple services, programs, activities, etc. that are provided to WSA members.

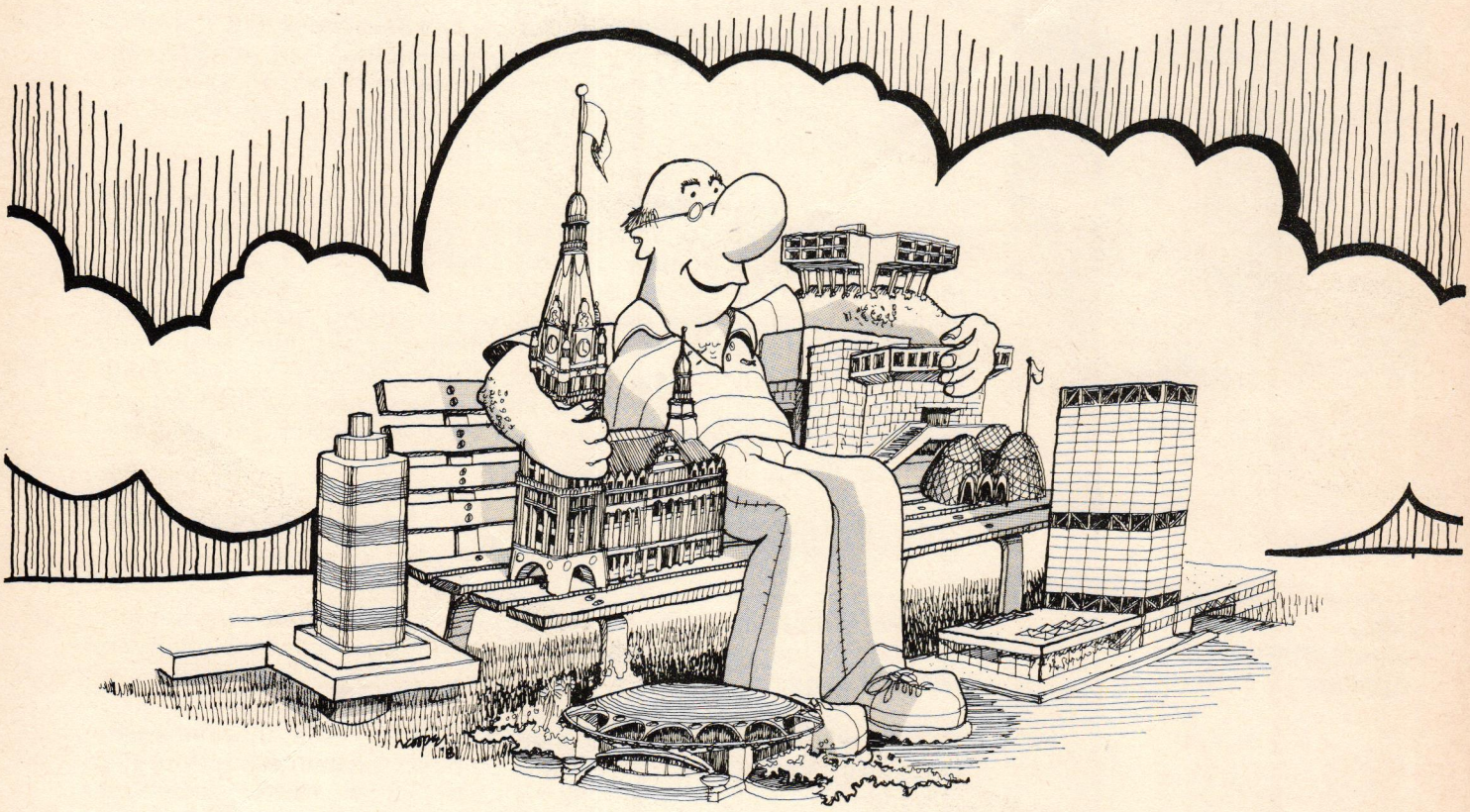
WSA membership dues have not been raised in six years.

Promote architecture by promoting membership in the WSA.

1981 HONOR AWARDS REPORTS

A record breaking 37 firms submitted over 84 projects to be reviewed by the jurors as part of the WSA 1981 Honor Awards Program.

MAKE FRIENDS WITH BUILDINGS



ARCHITECTURAL AWARENESS WEEK... in southeast wisconsin

OCT 2 - OCT 11, 1981

events to open your eyes to the architectural world around you!

OCT. 2 SAND CASTLE competition at Bradford Beach, 3:00 p.m. to 7:00 p.m. — architects and student architects try their hand at designing in sand. (Oct 9, raindate.)

OCT 4. thru OCT. 7 Wisconsin Society of Architects design awards on display at M&I Bank, 770 N. Water St., Milwaukee.

OCT. 5 "Historic Impact of Local Architects on Milwaukee Building" - a talk by historian Russell H. Zimmermann at Engelmann Hall Auditorium, UWM, 7:30 p.m. - Public invited.

OCT. 6 "Public Awareness of the Built Environment" - a panel discussion by local architects, educators, critics, developers and legislators at Engelmann Hall Auditorium, UWM, 7:30 p.m. - Public invited.

OCT. 7 WSA/A.I.A. Design Awards Banquet for winners of the 1981 WSA Design Awards competition, Hyatt Regency, Milwaukee.

OCT. 8 OUTREACH DAY at Park Avenue Disco, 500 N. Water St., Milwaukee. Afternoon and evening events to interest young minority students in the field of architecture as a career - by invitation and in cooperation with the Milwaukee Public School system.

OCT. 10, OCT. 11 Display of local architects' work at Bayshore Mall.

OCT. 10 IVORY TOWER competition at Milwaukee Institute of Art & Design - a design charette for practicing architects and students.

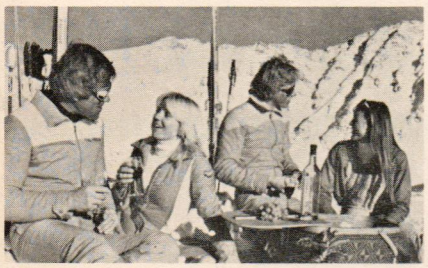
OCT. 11 "Church Architecture" - a talk by William Wenzler, A.I.A., on the development of church architecture, 2:00 p.m., St. Paul's Episcopal Church, 914 E. Knapp Street, Milwaukee - Public invited.

southeast chapter – wisconsin society of architects · american institute of architects

Juroring of the submittals took place in Milwaukee on August 12, 1981. This years jurors were Thomas H. Hodne, Jr., FAIA, Minneapolis; James Nagle, FAIA, Chicago; and E. J. Mackey, AIA, St. Louis. The award winning projects will be publicized in The Milwaukee Journal and The Wisconsin State Journal on October 4, 1981. Further publication of the winners will appear in the November issues of the Wisconsin Architect.

Awards certificates will be presented to the Architects, Owners, and Contractors at the annual awards dinner currently being scheduled during the first week of October. Further information publicizing the date, time and place of the dinner will be sent to all members.

THINK SNOW



The first annual Colorado winter seminar, sponsored by the Wisconsin Society of Architects, has been scheduled for February 7-13 at Keystone Resort, Keystone, Colorado. The intent of the program is to provide WSA members with informative and useful information on energy related topics from the perspective of the practicing architect. During the course of this one week seminar, 22 hours of programming will be presented. Seminar sessions will be held from 7:00-9:30 a.m. and 4:00-6:30 p.m. Monday-Friday. 22 hours of continuing education credit have been applied for to the American Institute of Architects.

Seminar information has been sent to all WSA members and early reservations are encouraged. A block of rooms has been reserved at the Keystone Lodge and condominium . . . but lodging space is limited and will be confirmed on a first come basis.

For more information, contact the WSA office or Jim Miller, AIA; Fred Zimmermann, AIA; Rollie Williamson, AIA; Doug Smith, AIA; Mary La Certe, AIA; or Chuck Wahlberg, AIA.

DID YOU HEAR THE ONE ABOUT SALES TAX FOR ARCHITECTURAL SERVICES???

One recent test balloon floated into the political atmosphere by Governor Dreyfus has been a proposal to extend Wisconsin's 4% sales tax to fees for professional services (including architectural fees).

The WSA has joined with a variety of organization representing a cross section of professions and commerce in Wisconsin for the purpose of opposing the proposed extension of sales tax to professional services. Reasons for this opposition include the following:

1. It is a direct and regressive tax on the individual consumers, businesses, and others who use professional and other services.

2. It increases the cost of doing business in this state as compared to surrounding states and places Wisconsin residents and businesses at a competitive disadvantage.

3. Smaller, new and marginal businesses will be hardest hit by the added tax burden.

4. Inactment of this will establish a permanent tax for what may be a temporary fiscal need.

5. It is a form of double taxation by the state because it taxes fees for services that are necessary in order to comply with tax and regulatory laws imposed by the different units for government.

To date this proposal has been introduced as proposed legislation, but only been bantered about by the Governor.

DCS Colors

FOR ARCHITECTURAL MASONRY

- Concrete Block Pigments
- Mortar Colorings
- Colored Masonry Cement
- Cement Colors

DCS Color & Supply Co.

All Products Availabe In:
- 50 Pound Bags
- Batch Sized Bags

1050 East Bay Street
Milwaukee, Wis. 53207
(414) 481-6170

"ATTENTION ARCHITECTS!"
— FOR YOUR SPECIAL PROJECTS —
CONSULT:

JAMES LUTERBACH CONSTRUCTION CO.

**** GENERAL CONTRACTORS ****

"SOME OF OUR PROJECTS ARE"
*SIMON AERIALS, INC., MILWAUKEE
*COURTHOUSE IN WEST BEND, WIS.
*WCTI (WAUKESHA COUNTY TECHNICAL INSTITUTE)
*ZARDERS RESTAURANT, NEW BERLIN
*4 SEWERAGE TREATMENT PLANTS

2880 S. 171st ST.
NEW BERLIN, WIS. 53151
-- For Your Bids . . . —
CALL: 1 - (414) - 782-1990

"ATTENTION ARCHITECTS"
For Your Steel Studs
and Drywall Installations
Consult:

CUSTOM DRYWALL INC.

CALL: 1 - (608) - 271-8200

Some Of Our Projects:
*JANESVILLE GARDEN COURT
*BELOIT SAVINGS BANK
*LUTHERAN COVENANT CHURCH STOUGHTON
*PAPERMART OFFICE BLDG. (APPLETON)
*WATERMARK HOTEL (APPLETON)
*PETON OFFICE PLAZA (MADISON)

918 WATSON AVE. MADISON, WI 53713

power failures . . . can mean business failures.

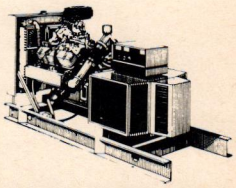
When the power goes out, you can tally the hours with dollar signs. Electrical blackouts take their toll in lost production and lost sales.

But blackouts don't have to happen to you.

A Kohler automatic emergency standby system can meet your power needs. When power goes off, Kohler comes on, automatically. Your business stays in business.

See us for more information on Kohler's emergency generator systems for industry, institutions, business, farms, and private homes.

Arthur G. Dietrich Co., Inc.
8035 N. Port Washington Road
Milwaukee 53217
Telephone 414-352-7452



641 Hickory Farm Lane
Appleton 54911
Telephone 414-731-6666

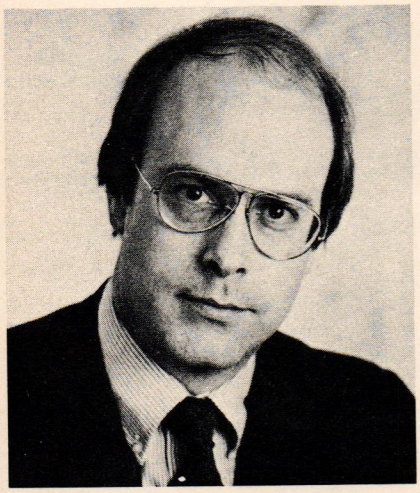
KOHLERGENERATORS

PEOPLE AND PLACES

EDWARD A. SOLNER, AIA, has moved his offices to The Professional Building, 6602 University Ave., Middleton, Wisconsin.

Surplice Associates, Inc. of Green Bay, Wisconsin announces the formation of two new Division; "SAI Industrial Engineering," and "Interior Planners".

REIMAR FRANK, AIA, has been appointed by Gov. Dreyfus to the DILHR one and two family dwelling code committee.



CHARLES M. ENGBERG

KAHLER, SLATER and SCOTT is pleased to announce that CHARLES M. ENGBERG, AIA, has been named Vice President and Director of Design.

The architectural firm of POTTER, LAWSON, PAWLOWSKY, GUERIN, and LOSCH has recently been formed, (previously Architectural Design and Construction Services, Inc.). There address is 5645 North Green Bay Ave., Milwaukee, Wisconsin 53209 (414-228-1190).

JOHN MEYER, AIA, has become a principal of the Madison architectural firm of Martinsons/Zeck/Meyer.

STEVEN D. CLARKE, was approved for Associate Membership in the Northeast Chapter.

CHRISTY FLEEGE, was approved for AIA Membership in the Northeast Chapter.

TIMOTHY A. FRATER, was approved for AIA Membership in the Southwest Chapter.

HARRY J. WIRTH, was approved for AIA Membership in the Southeast Chapter.

STEVEN A. SCHROEDER, was approved for AIA Membership in the Southeast Chapter.

WISCONSIN ARCHITECT NEWSGRAM

Changing offices or jobs? Have you or a partner been promoted or given a special award? A new project?

TELL US AND WE'LL TELL YOUR COLLEAGUES!

Please answer these questions about the news event you are reporting and mail this form to: Eric Englund, c/o WSA, 615 E. Washington Ave., Madison, WI 53703.

WHO? _____

WHAT? _____

WHEN? _____

WHERE? _____

WHY? _____

CAN YOU GIVE US THE NAME OF A PERSON TO CONTACT AND A TELEPHONE NUMBER IF WE HAVE MORE QUESTIONS ABOUT THIS NEWS HAPPENING?

PHONE: _____ NAME: _____

Do you have a suggestion for a Wisconsin Architect article? _____

SYMBOL OF EXCELLENCE

YOUR GUARANTEE OF QUALITY

T. J. HALE — MILWAUKEE
AMERICAN WOODWORK, INC. — MILWAUKEE
AUGUST H. WULF CO. — MENOMONEE FALLS
BERBAUM MILLWORK, INC. — MILWAUKEE
A. J. PIETSCH CO. — MILWAUKEE
GLENN RIEDER, INC. — MILWAUKEE
ARCHITECTURAL WOODWORK CO. — RACINE
RACINE MILLWORK & SUPPLY CO. — RACINE
KRUMPEN WOODWORKS INC. — GENOA CITY

CONSULT A MEMBER — ASK FOR A ROSTER

architectural woodwork institute
Wisconsin Chapter

COPY-MATICS
A Division of LITH-O-LUX Corporation

WISCONSIN'S LEADING GRAPHIC HEADQUARTERS FOR ARCHITECTURAL AND ENGINEERING FIRMS

- SPECIFICATIONS
- REPORTS
- PROPOSALS
- FEASABILITY STUDIES
- FOUR COLOR REPRODUCTIONS OF RENDERINGS

YOUR FULL SERVICE ORGANIZATION FOR

- CREATIVE ART
- COMPUTERIZED PHOTO TYPESETTING
- COMPLETE PRINTING TO 20" x 26"
- FULL SERVICE BINDERY

WITH

QUALITY, SERVICE, AND INTEGRITY

YOUR PROFESSIONAL SOURCE WITH OVER 16 YEARS OF EXPERIENCE IN THE A & E FIELD.

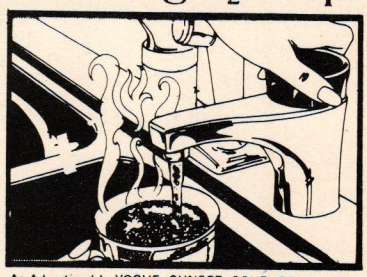
WE MAKE DEADLINES — NOT EXCUSES

STATEWIDE SERVICE VIA GREYHOUND, U.P.S. OR PERSONAL PICK-UP

6324 W. Fond du Lac Ave. Milwaukee, Wisconsin 53218
Phone: 414/462-2250

"Darling...you're much too busy to wait for a whistle."

THE NEW I-S-E
Steaming H_2O Tap.



As Advertised In VOGUE, SUNSET, SOUTHERN LIVING, HOUSE AND GARDEN MAGAZINES

PUTS MORE APPEAL IN YOUR KITCHENS.

The ISE H_2O Tap will make the kitchens of your custom homes, condominiums and quality apartments so much more appealing. What a fine demonstration item. Just turn the tap in front of your potential buyers or tenants and out pours 190° H_2OT steaming water, ready to make instant coffee, tea, cereals and other fast foods. If you want to impress them, the ISE H_2O Tap will do it...and at a cost you can afford. Write for our new free brochure.

ISE IN-SINK-ERATOR
In-Sink-Erator Division
Emerson Electric Co.
4700—21st Street
Racine, Wis. 53406
EMERSON

STATE OF KANSAS

DEPARTMENT OF ADMINISTRATION
Division of Architectural Services

JOHN CARLIN,
Governor
JOHN B. HIPP,
Director

625 Polk
Topeka, Kansas 66603
(913) 233-9367

June 24, 1981

Noble E. Rose, AIA
Post Office Box 955
Beloit, Wisconsin 53511

Walter E. Zoller, AIA
15255 Watertown Plank Road
Elm Grove, Wisconsin 53122

Dear Wally and Noble:

Obviously, I am one hell of a fine photographer to be able to take two genuine corn-fed Wisconsin sow's ears and turn them into a couple of natty silk purses!!! You two actually looked dignified; competent and intelligent.... at least for a couple of guys with exceptionally long foreheads.

Enjoyed our conversations, the lunches and the dinners. Even my daughters spoke about your congenial and interesting discussions with them. I explained that both of you were hustling and that they should always be suspicious of filthy old AIA officers. My wife said that was untrue and she would take either of you.

It is difficult for me to understand the success of the Wisconsin Society since I left. I suppose you two will take all the credit .... BUT, remember that I still have the "President's Hat".

So there!!!

Cordially,

Jack

JOHN B. HIPP, AIA
Director

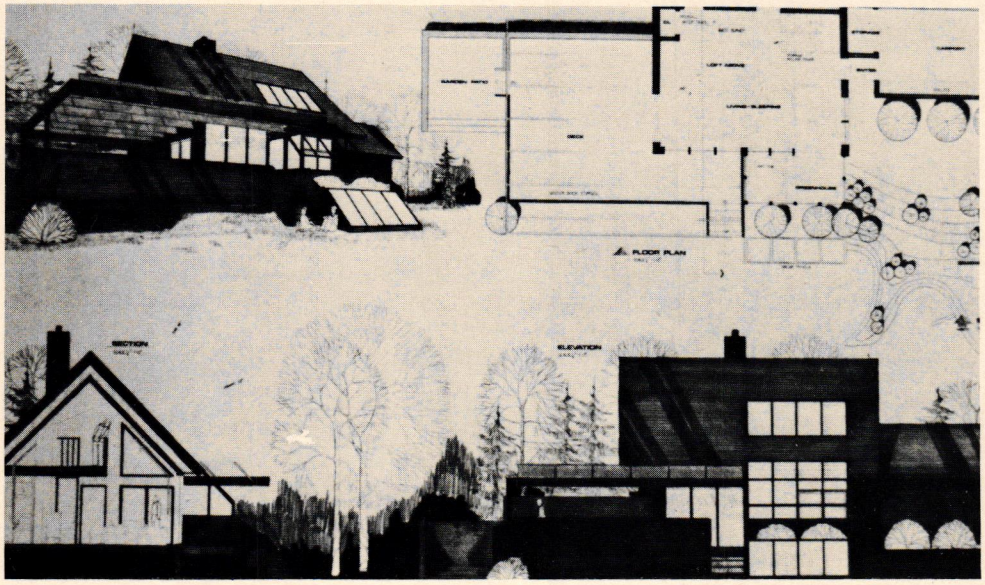
JBH:gda
Enclosure

Southwest Chapter's 1981 High School Architectural Design Competition

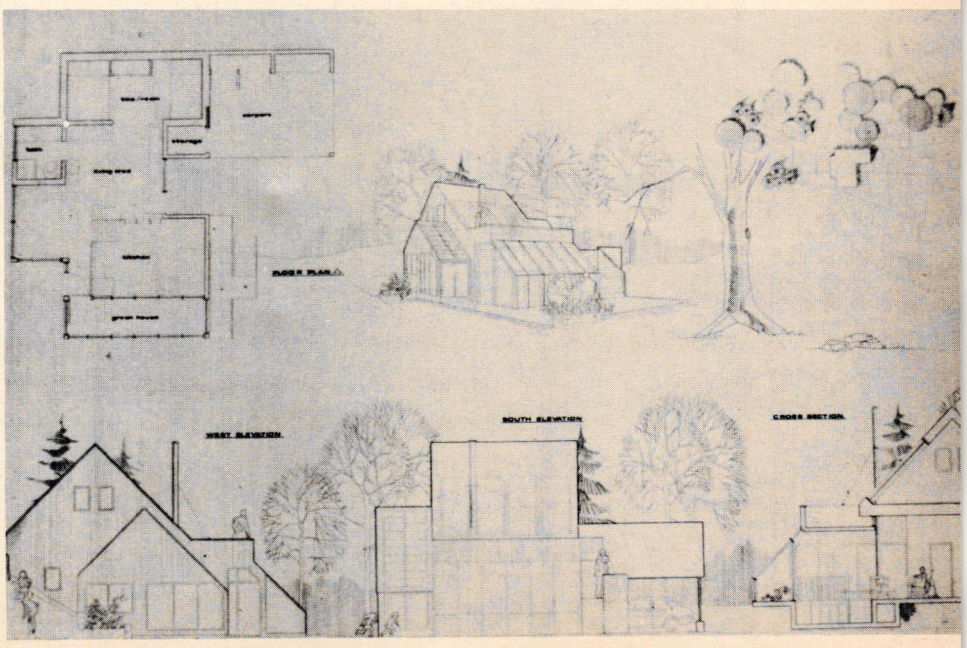
For the sixth consecutive year the Southwest Chapter of the WSA has sponsored a High School Architectural Design Competition. Participating in the 1981 program were students from 12 high schools located in the Southwestern part of Wisconsin. A total of 63 students submitted design solutions for an energy efficient "Recreational Retreat" on a hypothetical site in Southern Wisconsin, incorporating alternate energy sources into the design solution. Each participating school was assigned a critic who worked with the school's instructor and participating students. These architects met each week for six weeks with the students and their advisors.

The 63 entries were evaluated on the basis of creativity, design concept, presentation, technical skill, completeness, and program compliance. Judges for the 1981 program were John Meyer, Paul Thompson, and Mark Engman. Contributions toward the first, second and third place prizes were made by Jack Gruenhagen, President, Master Blue Print, Inc. of Madison, Wisconsin.

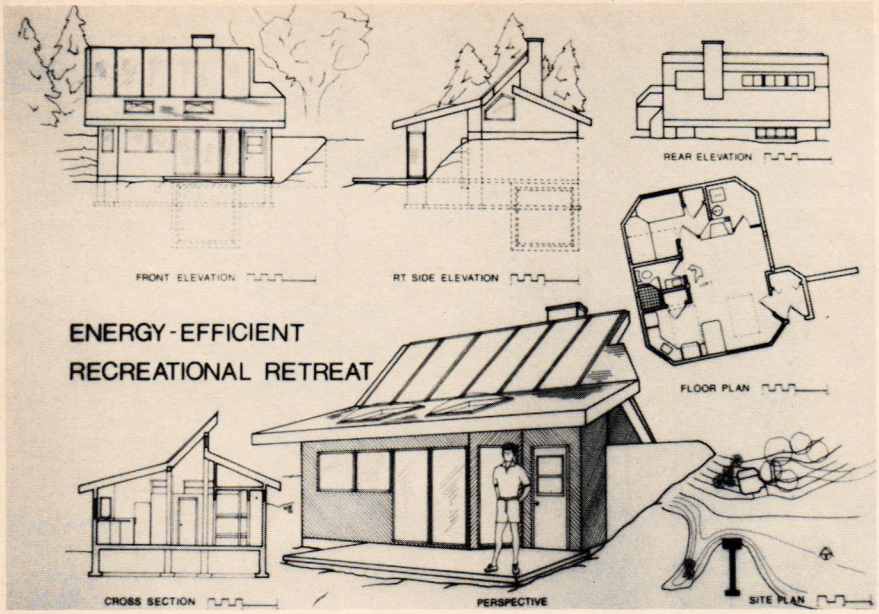
The editorial board of the Wisconsin Architect is pleased to present the following photographs of the winning projects. An awards banquet for the participating students was sponsored by the Southwest Chapter, with a banquet speech by Robert Beckley of the University of Wisconsin - Milwaukee School of Architecture and Urban Planning.



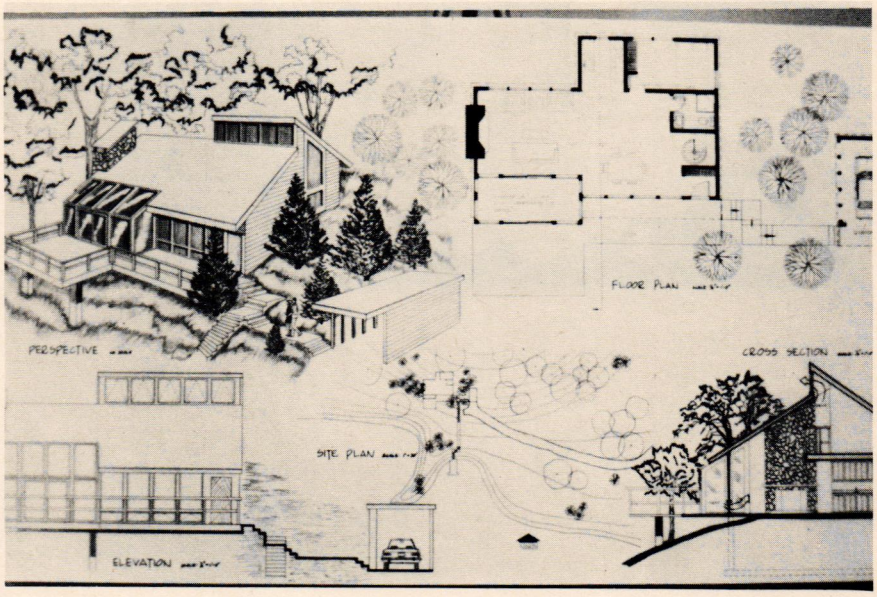
Wayne Whiting
LaFollette High School
1st Place



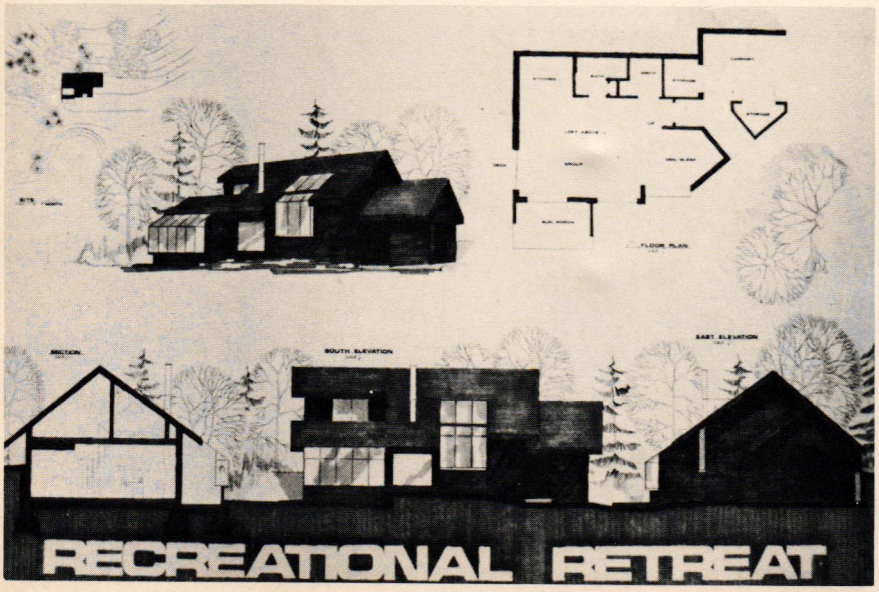
Jim Petersen
LaFollette High School
2nd Place



Taylor Maurer
Oregon High School
3rd Place

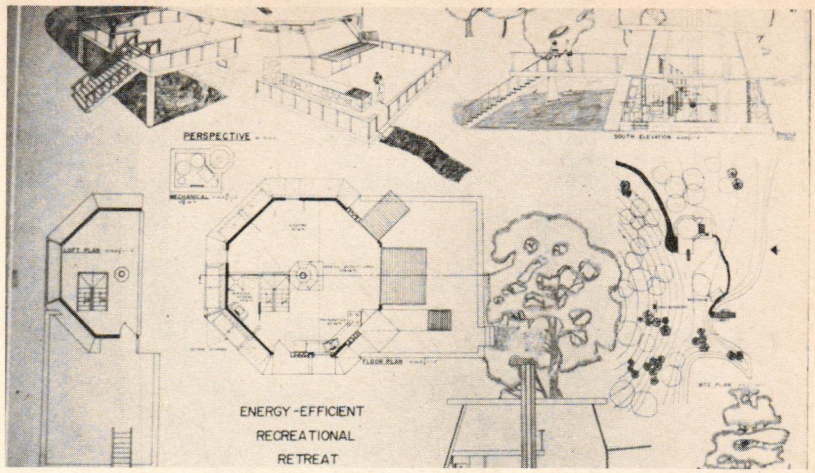


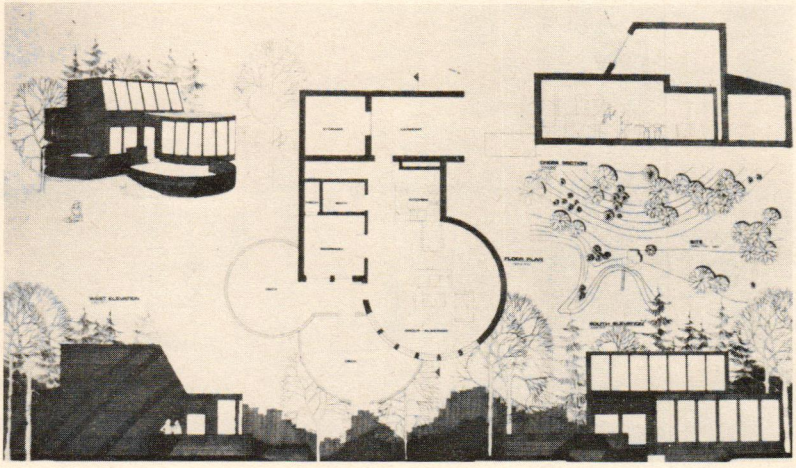
Eric Lawson
Middleton High School
3rd Place



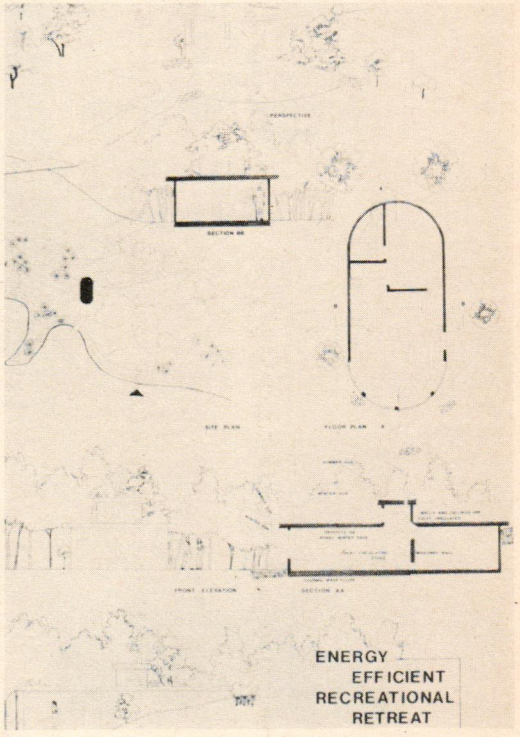
Steven Carlson
LaFollette High School
3rd Place

Sloan W. Brown
Middleton High School
Honorable Mention

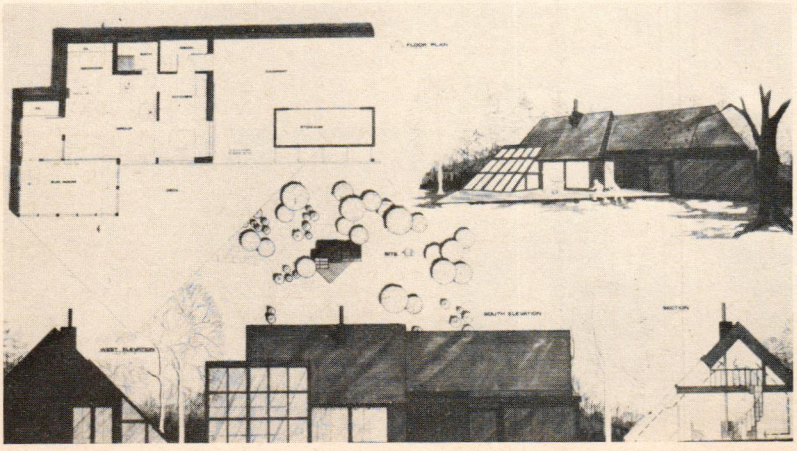




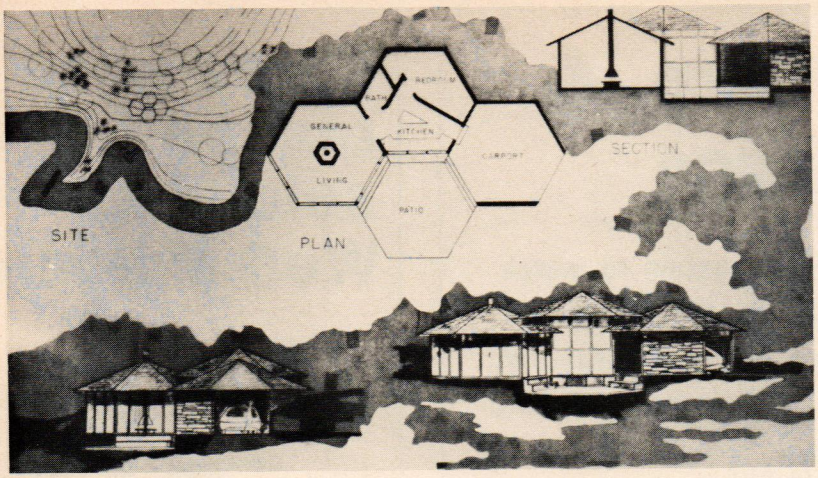
Dennis Kanouse
LaFollette High School
Honorable Mention



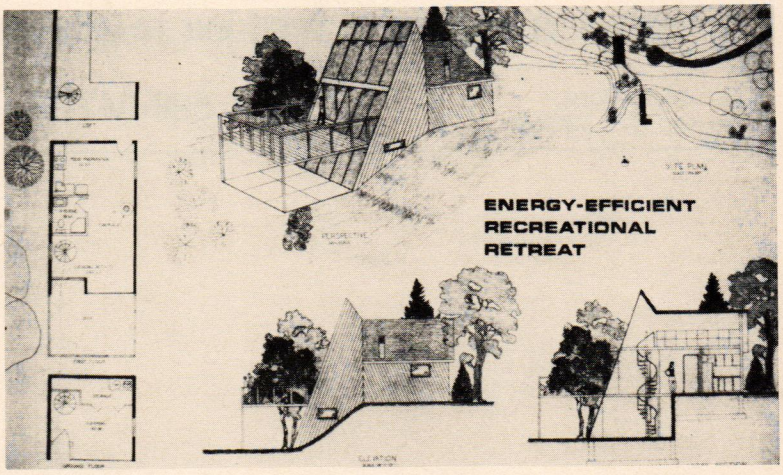
David Hull
Madison Memorial High
Honorable Mention



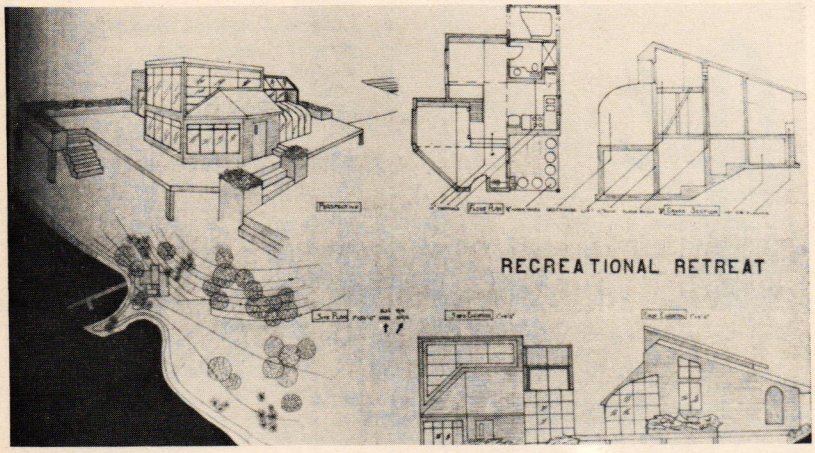
Terry G. Wendt
LaFollette High School
Honorable Mention



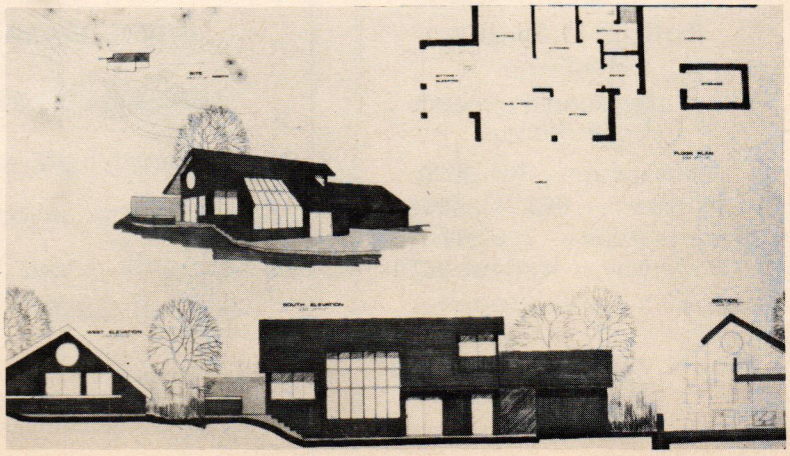
Terry Martin
Monroe High School
Honorable Mention



Hugh W. Jones
Middleton High School
Honorable Mention



Rick Marx
East High School
Honorable Mention



John W. Cerveny
LaFollette High School
Honorable Mention

Custofoam Corp. & 3M challenge

Any other highly insulated roofing system to match the quality, the R-factor (certified), the adhesion, the elasticity, the seamlessness, the weatherability, the after installation service . . . and above all . . .

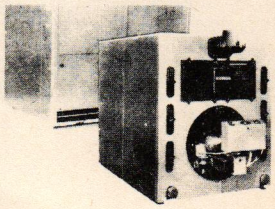
THE PRICE in our

SCOTCH CLAD/SPRAYED URETHANE FOAM ROOFS

Custofoam Corp.
Mauston, WI 53948

608-847-7447

Three good reasons for selecting Weil-McLain



THE CHOICE — Choose from a complete line of oil, atmospheric gas, and combination gas/oil boilers, from 187,800 to 6,060,900 BRU/Hr.

THE FLEXIBILITY — Match any job requirement with a choice of factory-tested packages, factory-assembled sections or individual sections.

THE QUALITY — Only Weil-McLain has such quality features as flame-retention oil burners, asbestor rope seal, short draw rods, multiple tankless water heaters, forced draft firing and, of course, cast iron construction.

Choice, flexibility, and quality . . . three good reasons for contacting your nearest Weil-McLain distributor.

Automatic Temperature Supplies, Inc.
1023 E. Main St. (Home Office)
Madison, Wis. 53703
Call: 1 - 608-257-3755
(WATS) Call: 1 - 800-362-8188

ROCK COUNTY BRANCH
Route 3, Hy. 51 - South
Janesville, Wis. 53545
Call: 1 - 608 - 754-8106
(WATS) Call: 1 - 800 - 362-8188

Wittock Supply Company
"THE HOME OF THE PLUMBERY"
P.O. Box 867 - Iron Mountain, Mich. 49801
Call: 1 - 906 - 774-4455
1310 S. Front St. - Marquette, Mich. 49855
Call: 1 - 906 - 225-1309

Package Boiler Burner Service Corp.

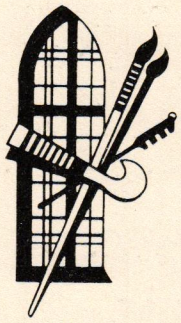
24 Hour Service

Authorized
Cleaver - Brooks
Parts & Service
SALES
Boiler Room Accessories
02 Trim Systems
And - Car Automatic
Bottom Blowdown
Systems
Rentals Complete Mobile
Boiler Rooms

Milwaukee — 781-9620
Madison — 608/249-6604
Stevens Point — 715/344-7310
Green Bay — 414/494-3675

Radio Controlled Fleet Trucks
Serving Wisconsin & Upper Michigan

5401 N. Park Dr., P.O. Box 365
Butler, WI 53007
781-9620



ENTERPRISE

ART GLASS

WORKS, INC.

6600 RIVER PARKWAY

• WAUWATOSA, WI 53213 •

AREA CODE 414 - PHONE 259-0100

• ESTABLISHED 1903

For over 73 years,
Creators of Stained Glass Windows
Traditional and Contemporary

J & H Heating Inc.

155 N. Park St.
Port Washington 1-284-5589

Lemberg Electric Co. Inc.

2324 West State Street
Milwaukee, Wisconsin 53233

Gerald W. Lemberg – Chairman of the Board
Ronald E. Maassen – President

Telephone (414) 933-5800

Pittsburgh Paints

Every architectural need for interior and exterior applications.

Paints and Coatings, Stains, Varnishes and Brushes for
HOME • INSTITUTIONS • INDUSTRY

A division of
PPG
INDUSTRIES

Area Sales Office
815 S. Layton Blvd. 383-2100

RETRO/C™

PATENT PENDING

REPLACEMENT OF SINGLE PANE with
Double or Triple Glaze
INSULATED GLASS
IN YOUR EXISTING SASH

- Factory Assembled
- 10 Year Manufacturer's Warranty
- Little Inconvenience To Customer
- Avoids Heat Loss

COMMERCIAL
or
INDUSTRIAL

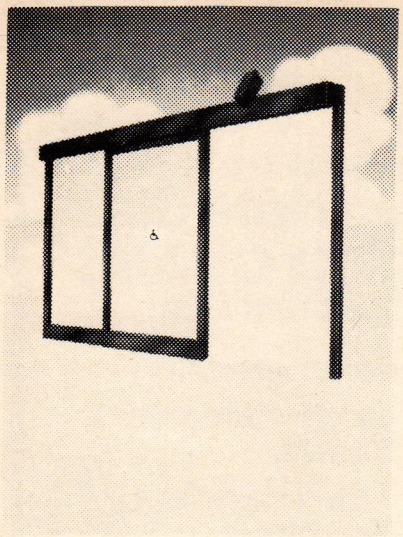
ADVANCE PLASTIC & GLASS, Inc.

4563 N. Hopkins Street • Milwaukee, Wisconsin 53209
873-8730

UIHLEIN ELECTRIC CO., INC.

ELECTRICAL CONTRACTORS
& ENGINEERS

12630 WEST TOWNSEND STREET
BROOKFIELD, WISCONSIN 53005



ENTER BESAM!

Besam has always been known as the world's largest and most uncompromising force in automatic door systems.

The Besam advantage is now available in the USA with two manufacturing plants and almost 50 distributors throughout America. And that Besam advantage is unique. All components are designed from ground zero and perform with extra capability and safety. All at no extra cost!

Exit compromises in automatic door systems

BADGER AUTOMATIC DOOR, INC.
SALES — INSTALLATION — SERVICE
8514 W. LISBON AVENUE
MILWAUKEE, WI 53222
PHONE (414) 461-9660

besam *We bring a world of experience to your door.*

SHEET METAL WORKERS UNION #24

When You Think of Solar Energy, Think of SMWIA

CERTIFIED . . . QUALITY . . . SKILLED . . .
DEPENDABLE . . . CRAFTSMANSHIP . . . GUARANTEED

When you think of solar energy, think of The Sheet Metal Union Craftsmen. We are Pleased to Share in the Success of your Architectural Building Programs.

OFFICE
5425 W. Vliet Street, Milwaukee, Wisconsin, 778-1100
Howard Morreau, Business Manager

A. J. HEINEN

General Contractor

Phone 547-1622

19805 W. LINCOLN AVE.
NEW BERLIN, WISC. 53151

SYRING CONSTRUCTION COMPANY, INC.

SUITE 102
KINGSWAY BUILDING
21001 W. WATERTOWN RD.
(HIWAY SS)
WAUKESHA, WI 53186

PHONE: 1-414-784-6377

General Contractors
Construction Managers
Specialists in Concrete Construction

THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA
SKILL RESPONSIBILITY INTEGRITY

MAIER

CARPENTRY
MASONRY
CONCRETE
PAINTING &
DECORATING

CONSTRUCTION, INC.
6442 RIVER PARKWAY
WAUWATOSA, WIS. 53213
PHONE: 258-3421

ARTHUR G. DIETRICH CO. INC.

HAS

Standby - Prime Power - Marine
Total Energy Systems -
Portable & Mobile
Available in Natural, L.P. Gas,
Gasoline, Diesel, Reciprocating
& Gas Turbine

KOHLER Electric Plants
WAUKESHA Industrial Engines & Enginators
ADCO/GARRETT Turbines

750 WATT THRU 2750 KW

(MAIN OFFICE)
8035 N. Pt. Washington Rd.
Milwaukee, Wisc. 53217
(414) 352-7452

(BRANCH)
641 Hickory Farm Lane
Appleton, Wisc. 54911
1 - 414 - 731-6666

CHEMSTOP WATERPROOFING

THORO

W. R. MEADOWS, INC.

With Names Like These Behind Us
You Know We're Not Just A Brickyard.

Serving Southern Wisconsin Architectural Needs For Over 76 Years.

Brick — Block — Pavers — Stone

All Your Masonry Needs At One Location

WISCONSIN BRICK & BLOCK CORPORATION

2840 UNIVERSITY AVENUE
MADISON, WI 53705
(608) 238-2636

BLUEPRINTING

FAST SERVICE ● QUALITY PRINTS

Ship us your originals — our trained staff will print your order and return by insured UPS delivery.

Call Or Write For Price Quote.

POTTER'S

Art Supplies ● Blueprinting
1227 Grant Street — Lake Geneva, WI 53147
(414) 248-3559

*Black & White Murals *8x10 Glossy Repros
*We Reproduce Blueprints or Masters For Making Blueprints

Photocopy Inc.
104 EAST MASON STREET
MILWAUKEE, WI 53202

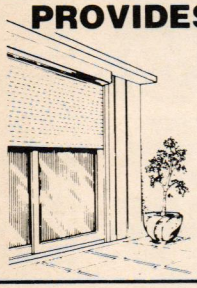
For Service . . .
CALL: 1-(414)-272-1255

Patio Doors Need Help!
So do balconies, porches and windows.

Roll-a-way
INSULATING SECURITY SHUTTERS

PROVIDES IT ALL

Storm protection.
Security and privacy.
Insulation.
Environmental control.



ROMATIC INC.

1206 High St., Union Grove, Wis. 53182
Phones: Racine 633-9261
Union Grove 878-1088

RESEARCH
DEVELOPMENT
FORMULATORS
of
EURYCON-X Epoxies and PLASTOMERIC Sealants for . . .
FLOORS - WALLS - ROOFS - TANKS - EQUIPMENT
BERYLEX CONCRETING SYSTEMS and STRUCTOGLAS

EURYCON-X FLOOR AND DOCK RESURFACER and MULTI-COLOR FLOORS
RESTORATION OF BRADLEY WASH FOUNTAINS
COLOROOF PLASTICIZED ROOFING PLASTOMERIC SEALANTS

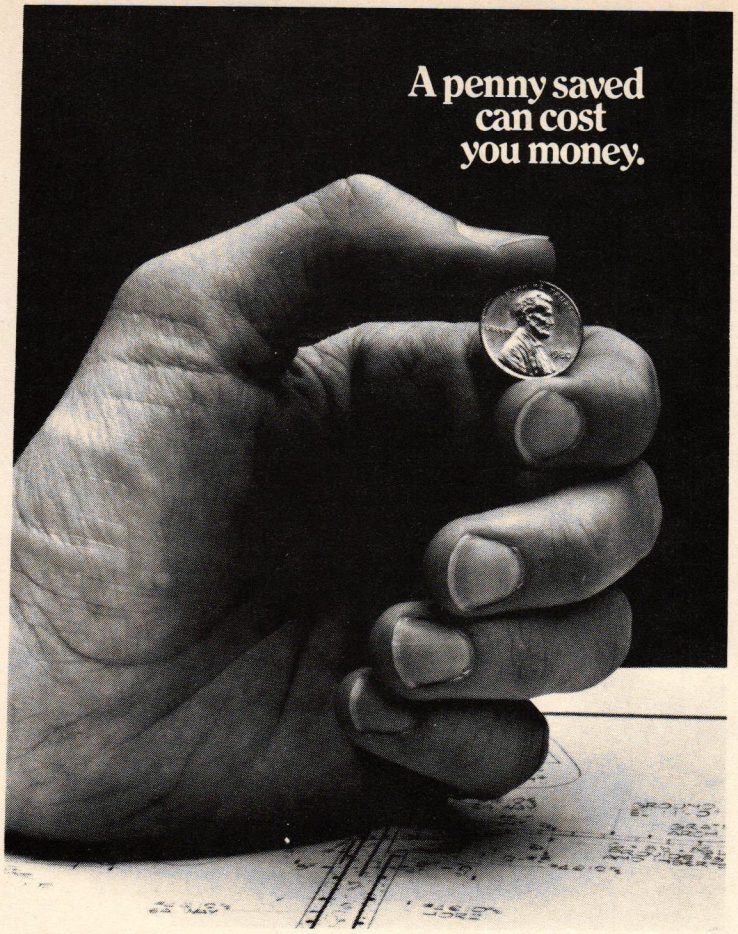
Associated Allied Industries, Inc.
MILWAUKEE, WISCONSIN 53209
5151 N. 32nd St. ● P.O. Box 09273
414-461-5050
"Wisconsin AIA 1981 Convention Exhibitor"

BETHEL STEEL FABRICATORS, INC.

6200 Forest Hills Road
Rockford, IL 61111
815/877-8021

Manufacturers of Miscellaneous Metal Building Products and Accessories

- Plate and angle construction
- Suppliers of grating and guardrails
- Rolling doors
- Steel stairs and railings
- Catwalks and ladders
- Stair nosings
- Equipment platforms
- Custom aluminum and stainless steel fabrication



You may be able to find Professional Liability Insurance Coverage for your architectural or engineering practice for less money, but you won't find a program that works as hard or does as much for you as CNA's Architects' and Engineers' Professional Liability Insurance, administered by Victor O. Schinnerer & Company, Inc.

We've been in the business a lot longer than any other company that provides this type of coverage. We've worked every step of the way with AIA and NSPE/PEPP to develop a program that answers your specific needs.

Ours is the most comprehensive professional liability insurance program available, with special features like the Deductible Credit Plan, First Dollar Defense Cost Coverage and Fully Retroactive Coverage.

So when you're looking for Professional Liability Coverage, don't forget to check what you're getting for your money. What you give up to save a little now could cost you a lot later.

The CNA Architects' and Engineers' Professional Liability Program is commended by the American Institute of Architects and the National Society of Professional Engineers/PEPP.

Victor O. Schinnerer & Company, Inc. Ask your broker for details

The First Is Still The Best

Program Administrators & Underwriting Managers

5028 Wisconsin Ave., N.W.
Washington, D.C. 20016
Phone: (202) 686-2850

55 E. Jackson Boulevard
Chicago, Illinois 60604
Phone: (312) 939-1202

40 Wall Street
New York, New York 10005
Phone: (212) 344-1000

595 Market Street
San Francisco, CA 94105
Phone: (415) 495-3444

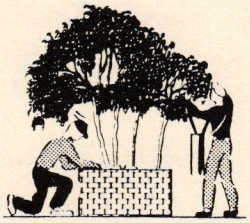
Specialists in quality acclimatized foilage plants

Rental and Sales

CONSULTATION • PLANNING SERVICE • INSTALLATION • MAINTENANCE

we care!

maxine
INTERIOR PLANT DESIGN



3948 N. MARYLAND AVE.
414·963·0753

THE PLANT RENTAL CO.

Brick & Tile Sales Center

OVER 30 YEARS OF SERVICE
TO SOUTHEASTERN WISCONSIN

COMPLETE SELECTION OF
BRICK — PATIO & FLOOR BRICK
PAVING BRICK & TILE THIN BRICK

Large Selection of Brick & Tile
In Stock for Immediate Delivery

Visit OUR DISPLAY SHOWROOM

HOURS:
MON, THRU FRI. 8:30 A.M.-5 P.M.
SAT. 8:30-12 NOON

353-6060

WISCONSIN FACE BRICK
& SUPPLY CORP.

CALL: 1 - (414) - 353-6060

7830 W. GOOD HOPE RD., MILWAUKEE

For Your Next Lettering Job
ARNDT ADVERTISING
RANDOM LAKE, WI 53075
(414) 994-4326
Your Spanjer Rep.
Contact
Metal Or Plastic Formed
Letters Installed On Your Project
Over 11 Years Of Quality Service

Ridgway's

REPRODUCTION SPECIALISTS

ARCHITECTURAL
ENGINEERING
&
DRAFTING
SUPPLIES
• OFFSET
• DIRECT PRINT
• SPEC PRINTING

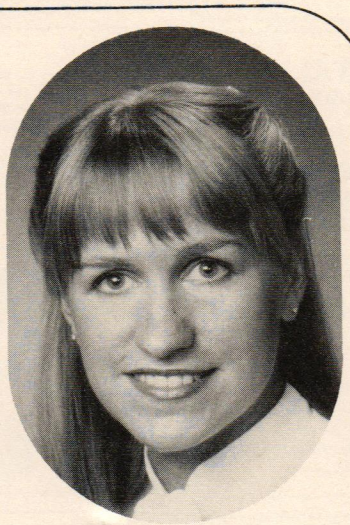
Hamilton
DRAFTING
SYSTEM

PRO/system Pin Register
Drafting
Clearprint Tracing Paper
Wild Surveying Equipment

784-6383

16230 W. Lincoln Ave. New Berlin
PICK UP AND DELIVERY

GOOD CARPET SELECTIONS DON'T HAPPEN . . .
THEY ARE PLANNED!



Our expert consultants are Contract Carpet Specialists factory trained to help your firm avoid costly errors when specifying commercial carpet. Carpet when matched to end use situations still provides the best R.O.I. of any floor-covering option. Call us on your next project and utilize our consultation to help you evaluate the product's applications to your end use situations. Good decisions require good planning. We're waiting to help you with any floor-covering question.

SOUTHEASTERN WISCONSIN - NEW REP.
Meet Karen Onzik, Marketing Representative . . .
We're glad to have Karen's skilled assistance to provide improved service to the Greater Milwaukee, Racine, Kenosha and Sheboygan areas.

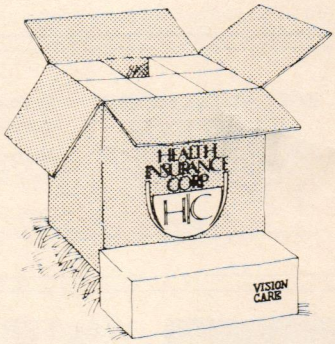
G. Wentworth SMITH INC

1-800-242-1878

FACTORY REPRESENTATIVES
FOR COMMERCIAL CARPET MILLS

Unwrap the H.I.C. Plus Package

And Insure A Clear View of Your World



Poor vision can lead to mistakes that are embarrassing, costly or even dangerous. Too often, proper eye care is neglected because of the cost involved.

HIC has the answer—the Prepaid Optical/Vision Program, part of HIC's unique Plus Package for employers. Insure the good vision of your employees. Help prevent those costly and dangerous mistakes. Call your HIC representative today for details.

HEALTH INSURANCE CORP
HIC

(414) 226-5000

MC-3804

ARNOLD AND O'SHERIDAN, INC.
CONSULTING ENGINEERS

Structural — Electrical
Mechanical — Civil

608-271-9651
815 FORWARD DRIVE — MADISON, WISCONSIN 53711

WARZYN ENGINEERING INC

Consulting Engineers
Civil • Structural
Geotechnical
Materials Testing
Soil Borings • Surveying
1409 Emil St., Madison, WI 53713
(608) 257-4848

EVCMPM

Construction Management Engineering Consultants
Value Managers Project Management
Professional Estimating Program Scheduling

ELZINGA & VOLKERS, INC.
101 East Milwaukee Street, Janesville, WI 53545 — 608-754-1202

MILWAUKEE TESTING
DIVISION OF WARZYN ENGINEERING INC.

Consulting
Geotechnical Engineers
Materials Testing
Soil Borings
2135 S. 116th St., Milwaukee, WI 53227
(414) 321-0100

WALTER R. RATAI, INC.
CONSULTING ENGINEER
WALTER R. RATAI, President
6559 NORTH SIDNEY PLACE
GLENDALE, WISCONSIN 53209
(414) 352-7850

BRUST ENGINEERING, INC.
7218 W. North Ave.
Milwaukee, Wisconsin
53213
Phone (414) 475-5554

Concrete Design
Steel Design
Precast Concrete Design
Post Tensioned Concrete Design
Structural Cost Studies

Soil Testing Services of Wisconsin, Inc.
Consulting Geotechnical And Materials Engineers
540 Lambeau St./Green Bay, Wis. 54303
Telephone (414) 494-9656
9055 N. 51st St./Milwaukee, Wis. 53223
Telephone (414) 354-1100

DAVID BARNETT GALLERIES
● Professional Art Consultants for Architects, Interior Designers, and Individuals
2101 W. Wisconsin Avenue
Milwaukee, Wisconsin 53233
Call: 1 - (414) - 344-6070

MH MANCI & HANING, INC.
Consulting Engineers
12645 West Burleigh Road
Brookfield, WI 53005 — (414) 782-9690
Heating, Ventilating & Air Conditioning

HOLLAND & KURTZ INC.
6619 W. Capitol Drive
Milwaukee, Wis. 53216
(414) 463-1600

Heating, Ventilating
Air Conditioning &
Plumbing

THE CORNERSTONE GROUP, INC.
© 1979

Planning
Engineering
Surveying
Landscape Architecture
Expediting and Inspection Services
Development Consultants

2000 East Racine Ave — Waukesha, Wis 53186 — 414-544-1111

DOLAN & DUSTIN, INC.
CONSULTING ENGINEERS
2266 N. PROSPECT AVENUE — MILWAUKEE, WIS. 53202
(414) 276-5502

GEORGE E. DOLAN, PE
THOMAS B. DUSTIN, PE
GERALD BRAUN, PE
ROGER A. NASS, PE
CHARLES MULLIKIN, PE
ARTHUR MILLER, PE

GRAEF ANHALT SCHLOEMER & ASSOCIATES INC.
CONSULTING ENGINEERS
Structural Municipal Environmental
6415 West Capitol Drive — Milwaukee, Wisconsin 53216 — 414-461-6900

skot weidemann
commercial photography
architectural exteriors, interiors, aerials 608-251-7932
1123 sherman avenue madison, wisconsin 53703

THOMAS H. JAESCHKE & ASSOCIATES, INC.
4085 N. 137th Street
Brookfield, Wis. 53005 — (414) 781-6564
CONSULTANTS — DESIGNERS
FOOD SERVICE SYSTEMS & EQUIPMENT
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL FCSI

Wisconsin TESTING LABORATORIES
Geotechnical Engineers
Soil Borings
Materials Testing & Inspection
Menomonee Falls, WI 53051 • (414) 252-3300

twin city testing
and engineering laboratory, inc.
GEOTECHNICAL AND MATERIALS
ENGINEERING/TESTING
Appleton — 414/733-8711 Eau Claire — 715/832-0282
La Crosse — 608/781-5330 Wausau — 715/359-9463

SRI *Structural Research, Inc.*
STRUCTURAL & ROOFING SYSTEMS
ANALYSIS · DESIGN · TESTING
3213 Laura Lane
Middleton, WI 53562
608-831-5333
P. O. Box 5576
Madison, WI 53705

DESIGN ENGINEERING SERVICE INC.
2720 N. 19th St.
Sheboygan, WI 53081
(414) 452-9980
Engineers & Designers
Of Special Purpose Machines,
Automation Equipment &
Custom Built Tooling
INHOUSE DRAFTING SERVICES

ASL
ACCURATE SECURITY
LTD.
Burglar — Fire — Sprinkler
Monitoring — Installation — Sales
Central Communication Center
215 Division St. — Oshkosh, WI 54901
1-800-242-0383

RCC
redmond construction company inc.
construction management · project development
general construction
10324 west silver spring drive · milwaukee, wisconsin 53225 phone 414 461-9310

Birks-Halyard Corp.
BH
Contractors-Developers
Environmental Engineering
4232 N. Teutonia Avenue
Milwaukee, WI 53209 414-445-8332

Wisconsin State Conference Of
Bricklayers And Allied Craftsmen
AFL-CIO
Ernest Hanzel, Secretary
2646 Union Street — Madison, Wisconsin 53704
(608) 244-6625

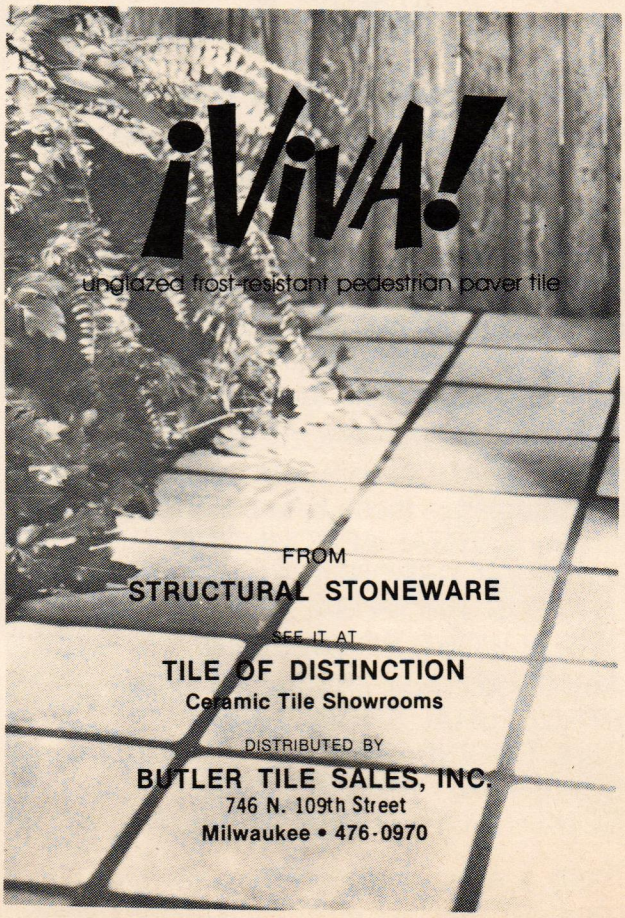
ri
RYAN INCORPORATED OF WISCONSIN
Contractors Specializing in:
Site Construction, Earthwork,
Aggregates, Grading
For information and cost estimates, Call R. G. Vorpahl
Janesville, WI 53545 P.O. Box 206 608-754-2291

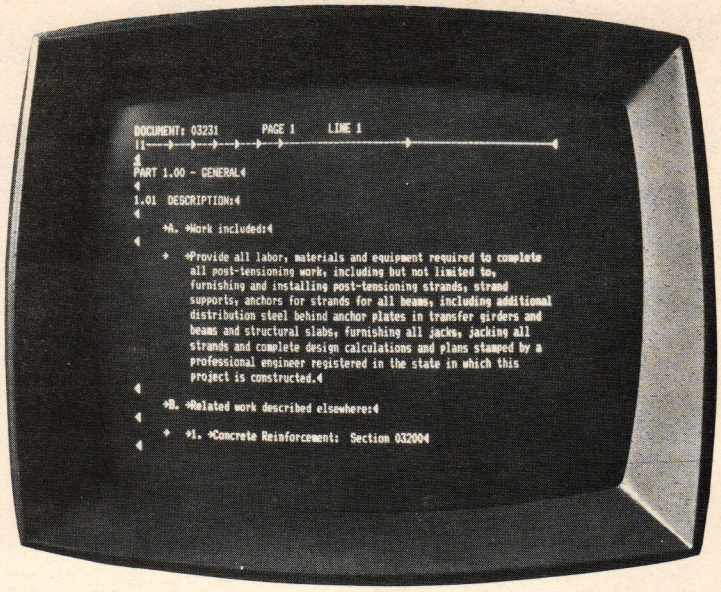
dave Anderson AILA
REGISTERED LANDSCAPE ARCHITECT
SUITE 208 • MILLOT ANNEX ☐ 4709 LISBON AVENUE
MILWAUKEE WISCONSIN • 53208 ☐ 414·445·4777

D'APPOLONIA
GEOTECHNICAL, GEOLOGICAL, MINING, ENVIRONMENTAL,
WATER RESOURCES & STRUCTURAL ENGINEERING;
CONSTRUCTION MANAGEMENT SERVICES; MATERIALS &
ANALYTICAL LABORATORIES; TEST DRILLING SERVICES
2015 W. MILL ROAD, MILWAUKEE, WIS. 53209
PH. 414/351-6311

WILFONG'S *Landscaping inc.*
"Nature's Beauty for Your Home"
RANDY A. WILFONG, President
Residential — Commercial — Industrial
New Construction — Additions
Professional Landscaping Design & Construction (414) 228-7771

Amble Landscaping Incorporated
3624 Pioneer Road • Verona, Wisconsin 53593
(608) 833-5111
Full Scope Design And Construction Services Statewide





SAVE TIME AND MONEY PREPARING SPECIFICATIONS

Imagine a single, easy to operate desk-top computer that saves time and reduces the cost of preparing specifications.

Eliminate repetitive typing and increase productivity of your staff. ECOM Programs and the versatile WANG Computer System brings you a single, multi-purpose system . . . reliable, upgradeable and **ready to use**.

The same WORD PROCESSING/ SPECIFICATION SYSTEM can also be used to computerize these time-consuming office functions: TOTAL ACCOUNTING
JOB COST REPORTING,
LETTERS, PROPOSALS, AND
OTHER WORD PROCESSING

And these critical engineering functions
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
SEWER AND WATER DESIGN
CONSTRUCTION MANAGEMENT

Today, staying competitive means utilizing computer assisted techniques to the fullest.

That's a field **we** pioneered. ECOM has recommended and supervised the installation of compatible computer hardware/software systems in over 350 firms, large and small, around the world. Whatever your specialized need, we know that we can help.

- USE YOUR PRESENT PERSONNEL
- USE IN YOUR PRESENT OFFICE ENVIRONMENT
- COMPACT
- EASY TO EXPAND TO MULTIPLE TERMINALS

We are ready to aid you in making the move to more efficient office production of SPECIFICATIONS and more. Give Gary Koser, our Director of Marketing, a call – **today**.

ECOM

ECOM Associates Inc. 5678 W. Brown Deer Road
Milwaukee, WI 53223 Telephone (414) 354-0243